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Prevalence of over-the-counter medication use among pregnant women: A cross-sectional study in some areas in the Palestinian West Bank

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Prevalence of over-the-counter medication use among pregnant women: A cross-sectional study in some areas in the Palestinian West Bank

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Prevalence of over-the-counter medication use among pregnant women: A cross-sectional study in some areas in the Palestinian West Bank

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Dedication

I would like to dedicate my thesis to my beloved parents, my father who always gave me the Support and challenge, my mother who always gave me the strength to be a better person in all Aspects in life, who used to take care of my kids to help me concentrate to finish my Master Degree, to my beloved husband, to my brothers and sisters who were always Supportive and helpful, specially to my beloved brother Yousef who used to drive me all the way to Abu Dies when I was 9 months pregnant, and wait until I was done with all my classes to drive me back to Ramallah.

Declaration

I certify that this thesis submitted for the degree of Master in Pharmaceutical Science is the result of my own research, except where otherwise acknowledged, and this (or any part of the same) has not been submitted for a higher degree to any other university or institution.

Signed: ……..

Melveen Mustafa Musleh Tarifi

Date: 28/5/2016

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Abstract

Background: Over-the-counter medications are widely used by the Palestinian population, including pregnancy women. This study seeks to find out the prevalence of use OTC medications by pregnant women, and the effects of these drugs on their pregnancy. The objectives of the study are concluded in finding out the level of using OTC medications among pregnant women, and the awareness of the effects of such drugs on the women and their babies. This study has been motivated by the fact that taking of over the counter medicines has in some cases resulted in the birth of deformed babies among other challenges health and physical challenges.

Methods: The study has employed a descriptive design. The population of the pregnant women will act as the target population. The sampling process was stratified by site and the researcher interviewed 555 pregnant women as target sample. Data were collected by interviewing the pregnant women in three main governate hospitals, in Nablus (North), Ramallah (Center), Hebron (South) and in private clinics and hospitals. These women filled out questionnaires to determine the prevalence of using OTC medications during their pregnancy. The data is analyzed by use of descriptive and inferential statistics and presented by way of statistical means.

Results: Of the 555 women, 391 (70.5%) women were taking OTC medications during pregnancy. The most reported medications used were; OTC vitamins, heartburn and acid reflux medications and analgesics with a percent of use 98.0%, 97.7% and 46.8% respectively. 67.8% of these mothers were in the ages between 20-40, and 64.1% were overweight women. The majority of those taking OTC medications during pregnancy had been directed by the doctors (58.2%), while the pharmacists were the lead source of the

information (83.1%). 65.0% of pregnant women thought that OTC are safe, but with consultation of the professionals and 29.5 % thought that they are totally unsafe.

Conclusion:

This study is the first study that detected the prevalence of OTC medications use in Palestinian pregnant women. The prevalence of use was high. We have identified the predictors of OTC medications use and the problems faced during pregnancy leading them to take OTC medications. The lack of awareness on using these medications during pregnancy is alarming. Educational programs should be held for increasing the awareness among pregnant women on the effects of OTC medications on their pregnancy.

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Abbreviations

OTC	**Over the counter**
USA	**United States of America**
PPI	**Proton Pump Inhibitors**
NBDPS	**National Birth Defects Prevention Study**
CDC	**Centre for Disease Control**
NGO	**Non-Governmental Organization**
WHO	**World Health Organization**
BDS	**Birth Defect Study**

Terminology:

Comorbidity	The presence of co-existing or additional Diseases with reference to an initial Diagnosis or with reference to the index condition that is the subject of study. Comorbidity may Affect the ability of Affected individuals to function and also their Survival; it may be used as a prognostic indicator for length of Hospital Stay, cost factors, and outcome or Survival.
Miscarriage	Expulsion of the product of Fertilization before completing the term of Gestation and without deliberate interference.
Morality	All deaths reported in a given Population.
Nullaprity	The state of never having delivered a live child.
OTC	Medicines that can be sold legally without a Drug Prescription.
Parity	The number of offspring a female has borne. It is contrasted with Gravidity, which refers to the number of Pregnancies, regardless of outcome.
Premature	Onset of Obstetric Labor before term (Term Birth) but usually after the Fetus has become viable. In Humans, it occurs sometime during the 29th through 38th week of Pregnancy. Tocolysis inhibits premature labor and can prevent the Birth of Premature Infants (Infant, Premature).

1. Chapter One

1.1 Background of the Study

The use of over the counter medication is increasingly becoming an issue of the day with regards to pregnant women; this is attributed by the fact that most women do not know they are pregnant until after a few months (Sachdeva et al, 2009). Awareness of the effects of OTC medication on pregnant women appears to be quite low. In most cases, pregnant women think that OTC medicine may just address the health issue it is prescribed for and do nothing further. Healthy birth is one of the key drivers of parents wanting to get children; therefore, medication concerns should not only be for the mother, but should also be extended to the fetus because it stands to suffer more effects than its mother. It is usually hard for a pregnant woman to know which medicines are harmful to her health and pregnancy and those that are not; whether they are prescriptions by doctors or OTC. All over the world education programs have been started for pregnant women. These are aimed at reducing the number of births with defects.

Previous research in the USA has shown that 30% of the OTC medications that were available in the markets between the years 1975 and 1994 had been used as prescription medicines. According to the research 80% of the pregnant women in America are users of

OTC medications. Of the 80%, only 60% of them seek the doctor's advice when they are selecting OTC medications. This research showed that at least 10% of all the birth defects are caused by drug exposure to the fetus. Since 1975, the FDA has commissioned studies on the risk factors of all drugs used in the USA by pregnant women. They have failed to research enough for most of the drugs during the pregnancy period due to ethical factors. Health professionals are expected to be knowledgeable about medicine, yet are unlikely to have received any specific education about prescribing to pregnant and breastfeeding women, a recent study survey showed that practitioners (GPs) advised women to avoid breastfeeding while taking medicines like metronidazole and ibuprofen. Furthermore, research has shown that health professionals often rely on the safety ratings given to medicines in pregnancy when making decisions about prescribing for breastfeeding women (Amir, 2011).

Adaptation to pregnancy is a vital component of any response to the increasing birth defects that are caused by these prescriptions. The degree to which the pregnancy is affected by the OTC medication is determined by the mother`s adaptive capacity to the pregnancy. For example, aspirin taken up to 8 days in one of the first lunar months of pregnancy showed no increase in the rate of malformations, but using Aspirin, even for short periods, after the 32nd week of pregnancy should be avoided due to a high incidence of premature closure of the ductus arteriosus. Using Aspirin during the third trimester may cause a reduction in fetal urine output and consequent oligohydramnios resulting in fetal malformations (Young, 1997).

Ibuprofen is the safest NSAIDS to be used during pregnancy but there is potential to cause premature closure of the ductus arteriosus and oligohydramnios if it is used in the third trimester of pregnancy (Young, 1997).

Acetaminophen (paracetamol) is the most commonly used OTC pain and fever medication, with more than 50% of pregnant women reporting use in the United States and Denmark. Recent human studies suggested that acetaminophen has endocrine disrupting properties which may affect neurodevelopment and cause behavioral dysfunction; by interfering with sex hormone or thyroid hormone function essential for normal brain development. There appears to be an association between acetaminophen consumption during pregnancy and children with symptoms of attention deficit/hyperactivity disorder (ADHD), characterized by inattention, hyperactivity, increased impulsivity, and motivational/emotional dysregulation. Hyperkinetic disorder (HKD) is a particularly severe form of ADHD (Olsen, 2014).

Decongestants, antihistamines, and expectorants are also some of the OTC medications that have not been studied adequately. Due to the lack of adequate information on these drugs, some physicians avoid prescribing these medications to pregnant women (Werler, 2005).

Use of Decongestant agents may increase the blood pressure or even result to constrictions in the uterine arteries; thus could affect the flow of blood to the fetus. This theory is debatable.

In the year 2000, the Obstetricians and Gynecologists Association of America together with the Allergy Association of America recommended the use of pseudoephedrine is the best choice of decongestant to pregnant women (Black and Hill, 2003).. This recommendation was based on studies that were done on animals. However, due to the fact that this medication may be associated with gastros chisis (a congenital defect characterized by a defect in the anterior abdominal wall through which the abdominal contents freely protrude), pregnant women should not consider it as their first option and it should be recommended when the benefits are outweighing the risks involved.

Antifungal agents such as imidazole, clotrimazole, and butoconazole are some of the drugs that are available over the counter. Results of Firth et al. (2014) review investigated a specific antifungal showed that there is no relationship between the antifungal and any fetal disorders.

Some reports stated that malformation of the fetus may be caused by the use of antacids that contain high levels of aluminum; however, there was not enough data to back up these reports. Most doctors will prefer to administer antacids that contain calcium rather than those that contain magnesium sulfate (Elise J Smolders, 2013).

PPI (proton pump inhibitors) is mostly used to treat acid related complaints (Kinoshita and Ishihara , 2008). Controlled examinations on the long term and short term safety of the PPI treatment showed that 30 to 50% of pregnant women suffer severe heart burns (Richter, 2005). Sometimes this heart burns exacerbate gastroesophageal reflux disease if it is pre-existent. Baron et al. (1993) showed that 52% of pregnant women first experience the heart burns in the first trimester of their pregnancy, 24% in the second, and 9% in the third. According to this review , heartburn is normal in healthy pregnancies. It also

reviewed the management and safety of administering the PPI treatment; it revealed that PPIs have very minimal effects on the pregnancy. However, to decrease the risks involved it is advisable to delay the PPI until after the first trimester since the more the patient nears conception the more the risks are increased.

A recent study also showed that some pregnant patients do not utilize the pharmacists around them for information regarding their condition and the use of OTC medication. 26.2% of them go to their friends who have been in the same condition to get advice on how to tackle the problem and use similar methods while 44.3% will refer to the internet. 32.8% of the pregnant women spend their time reading pregnancy books and journals to get answers on their condition. These sources have become more popular than the pharmacists, whereas the pharmacists are the ones supposed to have the most reliable information (Coomans, 2013).

Long term interventions may lead to a reduction in the number of malformed fetuses and babies; however, the greatest challenge facing this kind of intervention is the inability to reach all the pregnant women, which so far has proven to be impossible. This is complicated by the fact that some developing countries still have pregnant women giving birth at home, and some still use traditional methods of birth and hence cannot access the advice that is offered by the doctors in hospital on the use of OTC medications. The Ministry of Health has been advocating for pregnant women to visit the health centers and receive the doctor's advice on matters that concern their pregnancy. Over the years, colleges and NGOs have been working hard to study the various medicines that are offered over the counter to determine those that are advisable for pregnant women to use and which ones are hazardous to the health of their fetus.

1.2 Statement of the Problem

Medical therapy with pharmaceutical agents is of great concern to the wellbeing of the international society. Today most of the effects of OTC medications are not known to patients and even to the pharmaceutical professionals themselves. Some of these effects caused by these medicines are hard to treat and are irreversible. Given that this medication adversely affects the quality of human life; they should not be restricted based solely on the pregnancy. Most times the pharmacists do not have answers to their patients concerning which OTC medication to take and their effects on the baby. This will push the pregnant patients to seek help elsewhere, for example, in books and on the internet.

1.3 Research Questions

What is the prevalence of over-the-counter medication use among pregnant women in the Palestinian West Bank?

What type of OTC medications used during pregnancy?

What source of information is used to select OTC medication during pregnancy?

1.4 Research Objectives

To measure the prevalence of over-the-counter medication use among pregnant women in the Palestinian West Bank

To determine the type of OTC medications used during pregnancy.

What source of information is used to select OTC medication during pregnancy.

Factors and practices that have so far hindered awareness on the effects of OTC medication on pregnant women.

1.5 Justification of the Study

There is a need to take care of the pregnant women in the community. Most of these women suffer from various diseases during pregnancy and most of them do not understand why until it is a little too late when they have already given birth to a deformed child. Giving birth to a child who is deformed is a painful experience for any mother.

Development of awareness campaigns has been in practice for a long time. However, the results are not all that visible if you look at the number of women that are giving birth to children with defects due to the OTC medications. The work of these institutions needs to be synchronized with the activities of extension departments. There is a need for the development of policies that ensure the strides of development made on the research front, in terms of development of effective awareness campaigns, is matched with the actual effects of OTC medications on the ground. This study thus seeks to find out the most effective way to curb the problem of birth defects that are caused by OTC medications and the factors that hinder the development of adequate awareness to the pregnant mothers on the threats that are posed by taking over the counter medications. Before one starts with awareness, we need to understand the situation in the Palestinian community from prevalence of use, to types of medications used, to sources of advice or information for the use of OTC medications during pregnancy.

2. Chapter Two:

Literature Review

2.1 Introduction

OTC medicines are those medicines that are offered over the counter of shops without the prescription of doctors. The presence of a clear plan of action by way of policy formulation, involvement of instructional stakeholders and putting all efforts towards sensitization and awareness creation on the potential of giving birth to children who are 100% healthy by the pregnant mothers needs to be exploited.

This section thus carries a review of previous work by other scholars on the effects of OTC medications with the major focus on pregnant women.

2.2 Level of Awareness of the Effects of OTC Medications by Pregnant Women

The level of awareness on the effects of OTC for pregnant women has been on the rise owing to efforts by institutions and organizations such as WHO and the Boston university epidemiology center (BDS). Since 1976, such institutions have earned accolades for enormous strides made towards creating awareness on the effects of OTC medications (Mehnert, 2012). The lack of a linkage between the institutions and the service providers

and the absence of synergy between industries, research institutions, and the service providers have caused the failure of progress on the research fronts trickling down to the doctors and pharmacists. This is attributed to the lack of up to date avenues to share information to stimulate technology transfer (Kline, 2011).

Tilley (2006) carried an investigation about similar situations in Europe. It was interesting to find that expectant mothers across the board tend to make similar decisions at the time of expectancy. In his study, he noted that in UK, Belgium and Italy where birth rate is almost half that in the Middle East, the authorities heavily provide both financial and information resource.

Institutional bottlenecks in terms of research capacities and facilities for awareness creation have been the undoing of the awareness creation mediums. Institutions invest a lot of resources into the development of equipment, which most of the times are of little use to the pregnant women in the society. Emphasis should be placed on building awareness and enlightening the pregnant women on the risks they face when they take OTC medicines without the approval of a pharmacist or a doctor; enlightening the pregnant women helps them to derive maximum benefits from the awareness programs (Amir, 2011).

Studies have indicated that women with a higher level of awareness of the effects of OTCs, lower their risk of miscarriage and having children with hyperkinetic disorders. According to Jama Pedriats 70% of expectant women admit to have been taking the OTCs without knowledge of their side effects. This research further shows that 42.6% of those women experience some kind of complication either during pregnancy or while giving birth.

2.3 Factors and practices that hinder OTC medication effects awareness to pregnant women:

There are various factors that bar the awareness campaign from being as effective.

For example, lack of availability of a health center near the patients` location.

Pregnant women find it hard to travel now and then to go to a clinic. This makes some consider their problem as minor if it is a headache, heartburn and other small problems. Most of them may end up going to the nearest drug store and buy some medicines without knowing the effects the drugs will have on the fetus. Apparently, 46% of these women admit that they frequently visit a pharmaceutical outlet or chemist to buy medications for pain, cough, nausea and backache. The level of education is also an important factor for women who are pregnant for the first time; most of them do not know what they are supposed to do when faced with certain challenges during their pregnancy (Amir, 2011).

The British Medical Journal (2004) identifies poverty, policy failure and other mainstream factors as leading factors that raise the risk of complication during pregnancy.

The study carried out by the physicians' involved named regions in Africa, south Asia and Middle East as high risk areas for child birth during pregnancy.

Constraints at the policy framework level have caused the lack of awareness on the OTC medication effects on pregnant women. Some of these constraints are caused by the fact that some institutions have the sole development rights, lack of affordable credit and also some of the institutions compete with each other instead of working together (Ekor , 2013). Poverty may also be another hindrance. Some of the pregnant women who are poor sometimes cannot afford to visit the doctor or physician, every time they are faced with a

minor health problem, to consult them on the safety of the medication that they intend to use(Swartz, 2009). Research by various institutions has also proven to be of less value today mainly because of the fact that most of these research facilities offer different results; results from one institution cannot be backed by results from another institution. This creates confusion to the pharmacists on what medication they should offer to their pregnant patients. They may end up giving prescriptions of a drug that has worse defects on the fetus than another, for example, a research by the American college of Obstetricians and Gynecologists in the year 2000, recommended the use of pseudoephedrine as the decongestants of choice (Black and Hill, 2003).. However, later studies showed that patients should avoid this medication as it may result in gascroschisis (Kline and Westberg, 2011). It should be used when there is no other option available. This shows that some studies are inconclusive and cannot be depended upon while others are derived from mere assumptions.

2.4 Various Awareness Campaigns

A lot of institutions and organizations in the field of medicine try to create awareness on the effects of OTC medication on the pregnant women. Studies by the Slone Epidemiology Center on birth defects tested its hypothesis on 12,734 who had defect cases and 7,606 infants who were not malformed in the USA and Canada. The hypothesis showed a few associations with oral and intra nasal decongestants (Coomans, 2013). Publishing such findings in magazines and other media increases the level of awareness amongst patients. These findings should also be taught to pharmacists in institutions or seminars and this way they can transfer their knowledge to their patient. This will be a great step in solving the issue of awareness and education on OTC medication. The pregnant mothers should be well aware of the defects the child is likely to suffer due to some of these medications.

2.5 Institutional Support as a Factor that Affects OTC Medication Awareness

The functions of a research institution are to develop suitable results on the effects of OTC medications. Researchers should synchronize their research and development with extension services whereby patients are linked with their service providers who have the current best practice in mind. This has proven to be a great challenge in many countries. Sometimes this is challenged by the accessibility of the service provider by the patient; therefore, a lot of resources have to be extended to those pregnant women that live in such areas. Sometimes the research facilities do not extend their abilities to their full potential. This causes a slowdown in the ability of the institution to deliver results to the intended patients (Werler, 2005).

Brazier and Prayle (1998) also looked at the reality of OTC and other medicines ingested during pregnancy. Apparently, many mothers that take these medicines do not report because they do not see the need to or simply forget. Others use the OTCs to temporarily ease their discomfort. The use of home based care and self-healing techniques sometimes complicates the issues. Institutions have a responsibility to put in place initiatives that give the mothers proper information.

2.6 Summary and Gaps to be filled

Glover et al. (2003) conducted a study to identify the over the counter and herbal medication in rural areas. . In their results, they established 92.6% of the people living in the rural areas self-medicate themselves with one OTC product. 45.2% of those people use herbal medicines and 20.8% took more than one OTC medication during their pregnancy period. The study made note of an increase in the use of the medicines as the pregnancy

progressed. The most common OTC medications that had been used included; aspirin, prenatal vitamins, ibuprofen, and non-sedating antihistamines.

A larger retrospective study. conducted by the Slone Epidemiology Center in collaboration with the National Birth Defects Prevention Study, involved 10,000 pregnant women. According to this study, the most commonly used OTC medicines were acetaminophen, guaifenesin, diphenhydramine, and pseudoephedrine. The study discovered an increasing trend in the use of these medications. Analgesics and decongestants were most popular with white women who had attained the age of 20 years and above and those who had at least attained a high school education (Kline and Westberg, 2011).

Kline and Westberg, 2011 showed most of the pregnant women who use prescribed medicine are also likely to use OTC medications. White women, who were well educated, married, and those who were older and used alcohol, marijuana, and caffeine used OTC medicines more than any other group. Most of these studies try to prove or show the association of OTC medication and the maternal effects they pose to the pregnant women. There are no relevant articles that direct the pregnant mothers on where they can access this information or even give recommendations. There are no existing articles that give the view of pregnant women on the safety of the OTC medications (Peters et al., 2013). Pharmacists can provide important information and instructions to their pregnant customers; there are very few or no studies on pharmacists. Relevant education to the pharmacists can enable them to teach pregnant women that most of the drugs that are offered over the counter lack any evidence as to their safety. The goal of this study was to gather and analyze data related to OTC medicines, study the decision making behaviors of the pregnant women and their beliefs (Kline and Westberg, 2011). This will assist the

pharmacists to offer quality advice to their patients on which medications to use and which ones to avoid.

Dudin (2001), between 1986 and 1995, had reported a total of 730 stillbirths at Al-Makased Hospital, out of them , 156 (21%) had congenital anomalies, also he reported 828 neonatal deaths, out of them as did 306 (37%) had congenital anomalies .

There are limited studies about using OTC medications during pregnancy among Palestinian pregnant women. However, Al-Ramahi et al. (2013) had conducted a study to find the prevalence of using herbal medications . they found about 40.0% of the pregnant women were used herbs during their pregnancy, most of them (82.5%), because they thought that herbs are safer than OTC or prescribed medications.

Another study conducted by Shtayeh et al. (2015) , to evaluate the plants used during pregnancy and infant childbirth, postpartum and infant healthcare in Palestine. The study found that 72.3% of the women been interviewed reported that they used herbs at different pregnancy stages and for infant healthcare.

Sawalha 2007 conducted a cross sectional study in Palestine in which consumption of prescription and non-prescription medications by pregnant women was evaluated. Maternal intake of medications and supplements has changed over time, and it may be related to adverse reproductive outcomes. Pregnant women attending the prenatal clinic at Rafedia Governmental Hospital at Nablus/Palestine were interviewed using a questionnaire containing questions regarding medications intake and disease status. Of the pregnant women attending Rafedia prenatal clinic, 70.2% were village residents, 89.9% of them had no chronic diseases at the time of pregnancy except for anemia which was a common

condition. More than half of the pregnant women did take vitamins, iron, and calcium (56.4%, 63.3%, 57.8%, respectively) during pregnancy. Less than fifty percent of the pregnant women took folic acid. Nausea and vomiting were common but most women did not take any medications to treat it. Less than one third of the pregnant women took over the counter (OTC) medications, mainly analgesics, and more than two thirds took prescription only medications (POM), mainly antibiotics. Mean medication intake per pregnant woman was 1.6±0.9. Most of the women who took medications did take only one (44.5%), a lesser percentage took two (30.8%) or more (9.3%) medications. The medications taken belonged to categories B and C, and few belonged to category D. About 45% of pregnant women used herbal medications to treat mainly GIT problems such as upset stomach, diarrhea, and constipation. The majority of pregnant women in this study did not visit a dentist during their pregnancy. The study concludes that women and health care providers need to be educated about the importance of supplement intake during pregnancy. Self-medicating or doctors prescriptions of POM, OTC, and herbal medications during pregnancy support the importance of expanding the knowledge about the potential risks and benefits of such treatments.

This was supported by another cross sectional study that was conducted by Abu Arah (2012) in Palestine to assess knowledge of community pharmacists about safety of medicines during pregnancy and evidence based therapy of herbal products. The sample consisted of 342 pharmacists. Data was collected by self-administered questionnaires. The findings showed insufficient competence in providing information about safety of medications during pregnancy among community pharmacists. The study justified such results to lack of knowledge in certain aspects of pharmacy practice such as, evidence based indication of herbal products, herbal-drug interactions and medication safety during pregnancy. This study concluded that the government, universities and pharmaceutical

association should provide community pharmacists with continuous and up-to-date medication knowledge to improve patient counseling. The study recommended establishment of pharmacy continuing education center and make such education mandatory for re-licensure in Palestine (Abu Arah, 2012).

3. Chapter Three:

Research Methodology

3.1 Introduction

This chapter looks at the research design and the methodology employed to carry out the study. It clarifies the research design and explains the sampling procedure and the criteria used for selection. This section also describes the research instruments used and the procedures followed in their administration towards the target group. The chapter also brings out the procedures used to analyze the data.

3.2 Research Design

The descriptive research design is used in the study. This is appropriate approach that can be used to get the results of the study without any manipulations of the findings. The descriptive design can be used when the research problem is specific, and in our case study has an emphasis on the prevalence use of OTC medications by pregnant women.

3.3 Target Population

The target population is mothers who visited the selected healthcare centers and clinics in the area of the study.

This survey was carried out at a group of governmental healthcare centers and Gynecology private clinics and hospitals in Nablus (North), Ramallah (Center) and Hebron (South) cities between 22, January 2014 to 22, January 2015.

3.4 Sampling Procedures

The Study was carried out in the main Governorate Hospitals; Rafidia Hospital and Al-Watani Hospital in Nablus (north), Palestine Regional Medical Center & Rehabilitation Hospital in Ramallah (center), Alia Hospital and Al-Ahli Hospital in Hebron (South) . The interviews took place at private clinics and at the governmental mother care centers in the three mentioned areas. The sampling process was stratified by site to get the number of 377 samples.

3.5 Sample Size

The minimum sample size of this study was calculated to be 377 mothers based on Roasoft sample size calculator. The study investigator tried to get more than the minimum samples required and the actual sample size ended up being 555 pregnant women.

3.6 Research Instruments

The study employs the use of questionnaire to interview the targeted women by a trained research staff that helped in collecting the data, as a data collection tool. The questionnaire had both open and closed ended questions The questionnaire was written in English (Appendix1), and the questions were designed according to similar studies were taking place in different countries. The questionnaire translated into Arabic (Appendix 2); then translated back into English; and finally, compared of the back translation with the original English version by two of bilingual researchers. A pilot study of a sample of 20 subjects

(not included in the final analysis) was conducted to ensure that the final draft was clear, understandable and acceptable. The reliability of the questionnaire was assessed using Cronbach's coefficient alpha, the internal consistency of the instrument was 0.71.

The data was collected by interviewing the expected mothers personally, interviewing the expected mothers and not only distributing the forms to be filled helped in minimizing wrong or any biased collected data.

3.7 Data Collection Procedures

The study was approved by a committee of the Palestinian Ministry of Health (Appendix 3). The data were collected by interviewing the pregnant women, to observe and infuse the inputs of the targeted women with regards to the situation on the ground.

Information on demographic characteristics—including age, gender, education, and occupation and smoking status was collected. The interview also included questions related to the clinical situation and treatment of ailments. Information on Prescribed medication, OTC medication, GP and midwife visits, BMI, Null-parity and gravidity were also obtained.

3.8 Data Analysis

Data from the questionnaires were collated, statistically analyzed by use of descriptive statistics and inferential statistics. The data collected was analyzed using SPSS version 21.0; a data analysis software. Results are presented and discussed in tables, pie charts, and computed in percentages.

4. Chapter Four:

Results

555 women participated in this study; they asked to answer a questionnaire during their pregnancy, by interviewing each one personally. Out of the 555 women, 391 women 70.5% (Table 4.1 and Figure 4.1) used OTC medications during pregnancy, with an average of 2.54 medications per pregnant woman. The most reported medications used were; OTC vitamins 98.0% (AP5.Table 22), heartburn and acid reflux medications (97.7%) (AP5. Table 19), cold, cough or sore throat drugs (AP5. Table 18) were 2.3%, constipation, diarrhea, or upset stomach drugs were used by 9% (AP5. Table 20), allergies medications were used by 1% (AP5. Table 21) and analgesics were used by 46.8% (Tab.18).

The characteristics of the pregnant women and the results in relationship with OTC medications use during pregnancy are summarized in Tables 4.2, 4.3, 4.4 , 4.5 and 4.6. Pregnant women were more likely to take OTC medications during pregnancy if their age is between 20-40 (Table 4.2), over weight (BMI = 25-29.9) (Table 4.3) . 30.8% women who used OTC had no high school degree (Table 4.2) and in their second trimester (Table

4.4), did not have previous obstetric complications (miscarriage, prematurity or child mortality), nor Null-parity (Table 4.5) .

Table 4.5 shows 52.9% reported gravidity of 3 times or more, 25.9% showed parity of 4 or more. 64.5% were on-smokers and 98.9% did not consume alcohol (Table 4.3), 59.1% of the women who consumed OTC reported general practitioner visits of 3 times, 64.9% of them showed did not visit midwife during pregnancy (Table 4.4). 87.2% of the women who consumed the OTC showed no comorbidity conditions and out of the women who used OTC during pregnancy, 45.2% used additional prescribed medication (Table 4.6).

Table 4.1: Taken any over-the-counter (OTC) medications during your current pregnancy among respondents.

	Frequency	%	Valid Percent	Cumulative Percent
Yes	391	70.5	70.5	70.5
No	164	29.5	29.5	100.0
Total	555	100.0	100.0	

Figure 4.1: The percentage of taken OTC medications during current pregnancy among respondents.

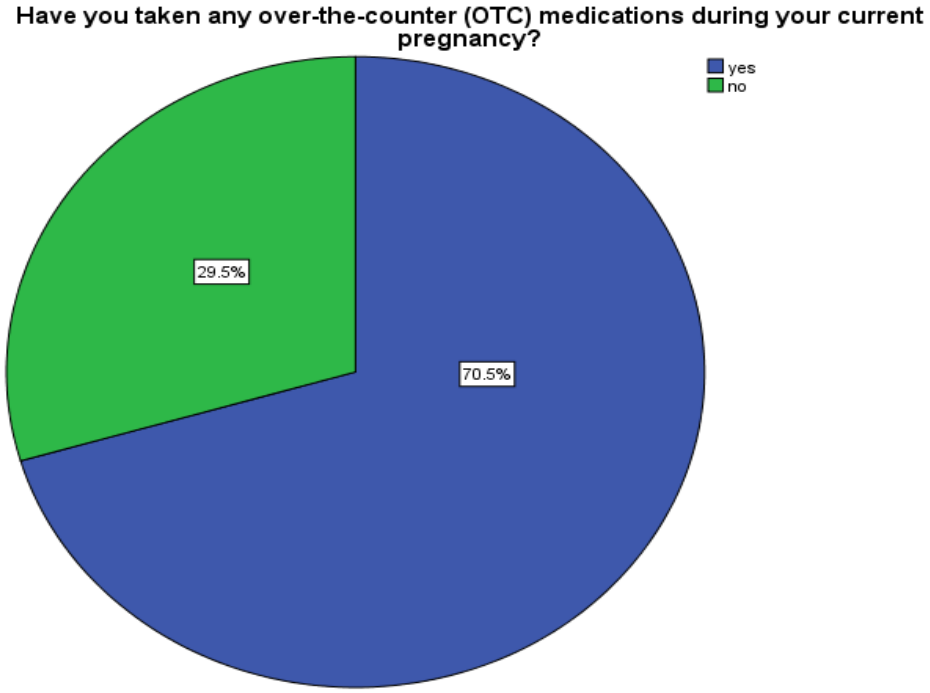

Table 4.2: Socio-demographic predictors and results of the relationship to OTC medications use.

Predictor	N	%	OTC medication use	%	No OTC medication use	%	Df	P (Chi 2)
Age								
Less than 20	162	29.2	94	24.0	68	41.5	2	0.00
20-40	352	63.4	265	67.8	87	53.0		
40-60	41	7.4	32	8.2	9	5.5		
Highest level of Education								
Less than high school	171	30.8	102	26.1	69	42.1	4	0.00
High school diploma	106	19.1	69	17.6	37	22.6		
College or technical degree	136	24.5	125	32.0	11	6.7		
4-year college degree	109	19.6	95	24.3	14	8.5		
Professional or graduate degree	33	5.9	0	0.0	33	20.1		

Table 4.3: Lifestyle predictors and results of the relationship to OTC medications use.

Predictor	N	%	OTC medication use	%	No OTC medication use	%	Df	P (Chi 2)
BMI								
<18.5	2	0.4	0	0.0	2	1.2	3	0.00
18.5-24.9	193	34.8	81	20.7	112	68.3		
25-29.9	356	64.1	310	79.3	46	28.0		
>30	4	0.7	0	0.0	4	2.4		
Smoking during pregnancy								
Yes	197	35.5	178	45.5	19	11.6	1	0.00
No	358	64.5	213	54.5	145	88.4		
Alcohol consumption during pregnancy								
Yes	6	1. 1	4	1.0	2	1.2	1	0.84
No	549	98.9	387	99.0	162	98.8		

Table 4.4: Current obstetric situation predictors and results of the relationship to OTC medications use.

Predictor	N	%	OTC medication use	%	No OTC medication use	%	Df	P (Chi 2)
Current Pregnancy Trimester								
0-3 months	54	9.7	38	9.7	16	9.8	2	0.00
4-6 months	196	35.3	195	49.9	1	0.6		
7-9 months	305	55.0	158	40.4	147	89.6		
General Practitioner visits								
0	29	5.2	0	0.0	29	17.7	3	0.00
1	53	9.5	46	11.8	7	4.3		
2	145	26.1	45	11.5	100	61.0		
3 or more	328	59.1	300	76.7	28	17.1		
Extra midwife visits								
0	360	64.9	345	88.2	15	9.1	3	0.00
1	51	9.0	10	2.6	41	25.0		
2	22	4.0	0	0.0	22	13.4		
3 or more	122	22.0	36	9.2	86	52.4		

Table 4.5: Obstetric history predictors and results of the relationship to OTC medications use.

Predictor	N	%	OTC medication use	%	No OTC medication use	%	Df	P (Chi 2)
Miscarriage								
Yes	194	35.0	157	40.2	37	22.6	1	0.00
No	361	65.0	234	59.8	127	77.4		
Prematurity/ mortality								
Yes	132	23.8	123	31.5	9	5.5	1	0.00
No	423	76.2	268	68.5	155	94.5		
Nullparity								
Yes	58	10.4	58	14.8	0	0.0	1	0.00
No	497	89.6	333	85.2	164	100.0		
Gravidity								
1	155	27.9	61	15.6	94	57.3	2	0.00
2	106	19.0	106	27.1	0	0.0		
3 or more	294	52.9	224	57.3	70	42.7		
Parity								
0	81	14.6	79	20.2	2	1.2	4	0.00
1	91	16.4	78	19.9	13	7.9		
2	139	25.0	96	24.6	43	26.2		
3	100	18.0	42	10.7	58	35.4		
4 or more	144	25.9	96	24.6	48	29.3		

Table 4.6: Comorbidity predictors and results of the relationship to OTC medications use.

Predictor	N	%	OTC medication use	%	No OTC medication use	%	Df	P (Chi 2)
Comorbidity								
Yes	71	12.8	25	6.4	46	28.0	1	0.00
No	484	87.2	366	93.6	118	72.0		
Have any healthcare professional prescribed you any drug (Prescription drugs)								
Yes	251	45.2	197	50.4	54	32.9	1	0.00
No	304	54.8	194	49.6	110	67.1		

When pregnant women that used OTC medications during pregnancy were asked about the recommender of using OTC medications, the majority of pregnant women have been directed mainly by doctors (82.6 %), and the rest have been recommended by midwives or nurses (12.3 %), using by themselves (4.1%) , and only 1% were recommended to use OTC by the pharmacists (Table 4.7)

Table 4.7 Distribution of OTC medications recommenders.

OTC recommenders	Frequency	%	Valid Percent	Cumulative Percent
Physician/Doctor	323	82.6	82.6	82.6
Midwife/Nurse	48	12.3	12.3	94.9
Pharmacist	4	1.0	1.0	95.9
I chose on my own	16	4.1	4.1	100.0
Total	391	100.0	100.0	

Otherwise, when those pregnant women were asked about the source of information of using OTC medications during pregnancy, pharmacists were the majority source of information for those women (82.9%), while only 9.2% got the information from physicians. Internet and social relationships were also sources of information for pregnant women about OTC medications, as 6.9% were searching on the internet or asking friends or family. Only 1% asked midwives or nurses (Table 4.8).

Table 4.8: Source of information about the OTCs for pregnant women

	Frequency	Percent %	Valid %	Cumulative %
Physician/Doctor	36	9.2	9.2	9.2
Midwife/Nurse	4	1.0	1.0	10.2
Pharmacist	324	82.9	82.9	93.1
Internet, Family and friends	27	6.9	6.9	100.0
Total	391	100.0	100.0	

Safety is the major concern for pregnant women, for themselves and their infants. The thought of the safety of OTC herbal or drugs use during pregnancy will affect the prevalence of use of these medications , 361 (65.0%) of pregnant women thought that OTC are safe, but with consultation of the professionals (Doctors or pharmacists) before using them, 27 (4.9%) thought of the safety of these medications, but they would check the safety on the internet or asking friends or family. 3 women (0.5%) thought that they are totally safe to be used during pregnancy, and 164 (29.5%) thought that they are extremely unsafe (Table 4. 9).

Table 4.9: The thought of the safety of [OTC, Herbal, Vitamin] use during pregnancy

How safe do you think [OTC, Herbal, Vitamin] are during pregnancy?	Frequency	%	Valid Percent	Cumulative Percent
Very safe, I don't need to talk to a healthcare professional before using.	3	0.5	0.5	0.5
Safe, but I would talk to a healthcare professional before using.	361	65.0	65.0	65.6
Safe, but I would check with resources, such as friends or the Internet, before using	27	4.9	4.9	70.5
Unsafe, I would not use these during pregnancy.	164	29.5	29.5	100.0
Total	555	100.0	100.0	

5.Chapter Five:

Discussion

In this study, we found that the prevalence of using OTC drugs during pregnancy among Palestinian women was 70.5%. This study is the first one has been conducted in Palestine study the predictors of using OTC during pregnancy; because of this, it was difficult to compare our results with previous results. Glover *et al*. (2003) found that in United States the prevalence of using OTC medications among pregnant women was 92.6%, while 10 years before in 1993, Rubin *et al.* found that using OTC by pregnant women was 53.6%. This highly increased in the prevalence among these years, could be explained by the widespread of the internet, and due to the easy access to pharmacists to ask for their recommendations. Nowadays most pregnant women go on a regular checkup with their doctor to make sure the fetus is growing well with no abnormalities shown, this makes it easier for physician to dispense the OTC as needed for pregnant woman. A recent study in 2011, which had been conducted among Hispanic American pregnant women, found that the prevalence of using OTC during pregnancy was just 23% (Bercaw et al., 2010). This could refer to the high awareness of women these days, and knowing that any medication may affect their health and might affect the fetus somehow during pregnancy or after

birth, nowadays some disorders might be related to medication use during pregnancy, and this makes the decision of taking OTC by themselves more prudent.

From the results, the age of the mothers and the level of education influenced using OTC medications during pregnancy. AP4. Table 1 shows the relationship between age of the respondents and taking OTC ($P<0.05$), 67.8% of those expectant mothers in the ages between 20 and 40 were reported to take an over the counter drug. This is unlike the 24% of those below 20 years and 8.2 % of those in the 41-60 brackets. Women in the ages between 20 and 40 are more likely to have previous pregnancies, more relationships, and they are more confident to take decisions than younger of 20 years. Also, older women in their expectancy stages seem to take OTCs less than those in the younger years, as their experiences much wider than the younger and maybe they can handle the unserious health condition without using any medication, and may not be willing to take any small chance to affect the fetus and maybe when an older woman gets pregnant, she is already worried about some genetic complications that might affect the fetus because of her late age, so they try to avoid anything that might affects the pregnancy in anyway .

The level of education and the intake of OTC have unique results as shown in AP4. Table3 ($P<0.05$). The respondents who are classified into five sections of highest education achieved give different outcomes. These classes include those less than high school, high school level, college degree, 4 years degree, and post graduate degree. Out of 171 respondents below high school which represent 30.8% from total sample, 26.1% indicated to have taken an OTC while 42.1% did not. The high school diploma holders who represented 19.1% of the total respondents recorded a 17.6% versus 22.6% intake to no-intake ratio. College or technical degree holders who were 24.5% of the total respondents represented a 32.0% to a 6.7% OTC intake to no-intake ratio. The professional graduates' expectant mothers who were 5.9% of the total respondents recorded a 0% to 5.9% intake to

no intake ratio. P <0.05 this indicates that there is relation between the education level and using the OTC during the pregnancy. It shows that professionals with graduate degree level avoid taking medication or maybe as we mentioned earlier the more educated they get the wiser they are. And a women with a professional level most likely to be older in age with a wide knowledge because of her scientific level.

For the aspect of trimester expectancy, it shows P<0.05 to have a big relation between using the OTC and the trimester. Out of 555 respondents, 9.7%, 35.7% and 55% represents the first, second and third trimester respectively. The first trimester had a percentage intake of OTC to be 9.7% while the second and last had 49.9% and 40.4% respectively while the rest do not acknowledge to taking the OTC. The first trimester of pregnancy is sensitive; women in this period are extremely cautious about taking any drug that might affect the baby or cause miscarriage. The results indicate that more women take OTC during the second phase of their expectant period.

In this study, we found almost 3 out of 10 respondents have reported a miscarriage. The statistics indicates that out of 194 of those that did miscarry, 157 still use OTC while only 37 did not. Therefore the relationship between miscarriages versus OTC intake appears to be proportional, and this could be a factor in their miscarriage (P<0.05).

Also, there appears to be a relationship between previous premature birth or mortality (Infant death after born) and OTC intake (P<0.05). Out of the 555 respondents that were taken to task, 132 indicated to pass a previous prematurely or mortality, while 423 did not. Out of the 132, 123 women took OTC drugs during pregnancy while 9 had previous prematurity/mortality but did not take OTC during pregnancy (AP4. Table 6). This statistical finding should be interpreted with caution since out of the 423 ladies who did not pass previous prematurity/mortality, 268 were taking OTCs during pregnancy.

On the aspect of Nullparity, 58 respondents out of 555 had Nullparity the 58 women were OTC users. 89.5% of the total sample didn't experience Nullparity out of this number; 333 did use OTC but 164 women did not. (AP4. Table 7).

Gravidity counts ($P<0.05$) and the level of intake of the OTC have a relationship. 15.6%, 27.1% and 57.3% represent the women with a single, two or three counts of pregnancy respectively, that indicated to be taking OTC while the rest did not (AP4. Table 8). Those women that have had more pregnancies seem to be taking more OTCs than those that have less counts of gravidity, this might be explained that women with more experience feels more confident to use the OTC under the doctor supervision. It showed a relation between the number of kids in the family and taking the OTC, where it showed ($P<0.05$) (AP4. Table 9), where the women with OTC intake showed 20.2%, 19.9%, 24.6%, 10.7% and 24.6% represents the parity count of 0, 1, 2, 3 and 4 respectively.

Women that smoke were also interviewed to establish their level of OTC intake (AP4. Table 10) to show a relationship ($P<0.05$) between consuming the OTC by pregnant women and smoker, 35% of those admitted to smoke while the rest did not. Among the smokers, 45.5% took OTC while 11.6% did not. Those who do not smoke and did not take OTC are represented by 88.4% of the sample.

A very small percentage of pregnant women used to take alcohol. Only 1.1% admitted to be taking alcohol while 98.9% do not (AP4. Table 11), the result indicate no relationship between taking alcohol and taking OTC during pregnancy ($P>0.05$).

Women who used to visit the doctor more show more use of OTC ($P<0.05$), the pregnant women with 0, 1, 2, 3 or more visits had a 0%, 11.8%, 11.5% and 76.7% respectively for using the OTC (AP4. Table12). But different result can be observed with midwife visit, extra visits to the midwife and OTCs have a relationship according to the results too ($P<0.05$). Those that had 0, 1, 2, 3 or more counts of visits to the midwife have 88.2%,

2.6%, 0%, 9.2% use of OTC respectively (AP4. Table 13) i.e. the women who did not visit the midwife showed a very high rate of OTC use but the women who did visit the midwife showed very minimal use of OTC so the relation is inversely proportional between the visits and using the OTC of the mothers that were having a disease or a related condition, the uptake of OTC have a relationship too ($P<0.05$). 6.4 % did take OTC medicine while 28% did not (AP4. Table 14).

In that perspective, of those that a physician had prescribed an extra drug, 32.9 % avoided to take the OTC while 50.4 % took extra OTC, it shows a relation between using OTC and a healthcare professional prescribing a prescription drug ($P<0.05$). All respondents agreed to have been referred to take medicines by a given party (AP4. Table 15).

This shows that lack of knowledge can lead to poor decisions made during the pregnancy period.

The safety aspect of OTC is one of the most interesting aspects that they reported. Almost 70% of those respondents agree that they are safe and can be used; they agreed that it won't be vital for a person to consult a physician, checking the internet or asking relative or friend before engaging in any of the consumption of the medication (AP4.Table 26).

The results indicate that majority of those that use the OTC has been directed to use them by a doctor, nurse or pharmacist. Out of the 391 respondents, 323 used the doctors recommended OTCs representing 82.6% portion of the equation (AP4.Table 24). On the other hand, pharmacists were the lead source of information, at 83.1% for the OTCs then the physicians (9.2%), and the internet followed suit where represented 6.9%. (AP4.Table 25). This is an indication that majority of the expectant mothers trust commercial pharmacists for information on OTC than physicians, and this support the role of the society pharmacists, or maybe the physician does not really give enough time for the patient so as to give the right amount of information needed.

5.1 The OTC medications taken during pregnancy:

Pregnant women seem to suffer from different complications during their pregnancy; these complications differ from one pregnant to another. They could be; pain, stomach spasms, heartburn or acidity, constipation, diarrhea, allergy …etc. OTC medications could help women to get rid of these symptoms.

The results indicate that the OTC vitamins is the most common OTCs taken by pregnant women (98%) (AP5. Table 22) although not all pregnant women need these vitamins. These women thought that vitamins are essential for their bodies and their babies, but they did not realize that a lot of vitamins could be harmful for the baby, such as vitamin A. Heartburn or acid reflux medications are the second common drugs taken by pregnant women (97.7 %) (AP5.Table 19); this shows high prevalence of heartburn during pregnancy especially during the last trimester, as the baby presses the stomach of the mother causing acid reflux into the esophagus. 46.8% (Ap5. Table17) of pregnant women that taken OTC medication have taken analgesics drugs, such as; paracetamol, aspirin or ibuprofen. These women could suffer from back pain, legs pain, headache… etc.

We would find the relationship between obstetric history predictors (miscarriage, prematurity or mortality, gravidity and Nullparity) with taking of OTC medication by pregnant women as explained below.

As mentioned previously, out of 391 that taken OTC during pregnancy, 157 (40.2%) had miscarriage and 234 (59.8%) did not (AP5. Table 5), ($P>0.05$) shows that there might be a relation between the miscarriage cases and using the general OTC during pregnancy. For the analgesics drugs (paracetamol, ibuprofen and aspirin), out of the 391 respondents, 42.7% took these OTCs and had a miscarriage while 49.6 % still took it and did not have any miscarriage ($P>0.05$). This shows that there is no signification relationship between the miscarriage and taking these NSAID's (AP4. Table 19), However, Nielsen et al. (2001)

and Li et al (2003) , reported an association with taking NSAID'S during pregnancy and increased the risk of miscarriage.

Out of the 391 respondents, 9 took cold, cough, or sore throat drugs (nasal sprays, Lozenges, pseudoephedrine), only 3 had a miscarriage and 6 did not (AP4. Table 20). There is no enough data to determine the relationship between cold drugs and miscarriage, but from our data we could report that there is no relationship P=0.67. In the other hand, Erebara et al (2008) reported that using cold medications for short term during pregnancy does not affect the pregnancy .

Most of the respondents were taking heartburn drugs (antacid, famotidine, ranitidine, omeprazole), out of 157 that had previous miscarriage, 154 (98.1 %) of them were taken heartburn drugs, while 228 (97.4%) that also took these OTCs but did not have miscarriage (AP4. Table 21). From the results, there is no relationship between heartburn or acid reflux and miscarriage (P=0.67).

Gastrointestinal problems are common among pregnant women, but in our data there were only 35 respondents were taking OTCs for constipation, diarrhea, or upset stomach (laxidin, lopremide), 6 of them had a previous miscarriage and 29 did not (AP4. Table 22). The data indicates that there is a relationship between the Gastrointestinal OTC and miscarriage (P=0.004) but our sample was a bit small so maybe we will get a different result if we have a bigger sample to interview in a different areas.

Out of 4 respondents were taken allergic drugs (diphenhydramine, cetirizine, loratidine), only 1 had a miscarriage and 3 did not. The data is not enough to determine the relationship between these OTCs and miscarriage but as analytical data that shows P=0.53, we could say that there is no relationship between this OTC's and miscarriage (AP4. Table 23OTC vitamins (vitamin D, calcium, prenatal vitamin, folic acid) are common among pregnant women, out of 383 taken these vitamins 154 had miscarriage and 229 did not

(P=0.87), this indicates no relationship between OTC vitamins and miscarriage (AP4. Table 24).

Child premature birth is to get the infant before 37 weeks of pregnancy and this increase the mortality of the baby. Prematurity affects the growth and the development of the preterm baby. Out of 391 respondents that taken OTCs, 123 (31.5%) had a previous premature or mortality baby, and 268 (68.5 %) did not had a premature baby (AP5. Table 6).

AP5. Table 28 describes the relationship between OTC medications taken during pregnancy and the previous child prematurity or mortality.

10 pregnant women (8.1%) were taking analgesics drugs (paracetamol, ibuprofen or aspirin) and had a prematurity or mortality, while 173 (64.6%) were taking these drugs but did not have premature baby, with a $P<0.05$. This indicates that there is relationship between taking the analgesics OTCs and having premature baby (AP4. Table 25).

None of the respondents that were taking medications for cold (Ap4. Table 26) or gastrointestinal problems (AP4. Table 28) had a premature baby or mortality child ($P<0.05$). From our data we can indicate that there is no relationship between using the cold and GI OTCs and prematurity/mortality

Out of 123 had prematurity or mortality, 114 (92.7 %) were taken drugs for heartburn (antacid, famotidine, ranitidine, omeprazole), and all of the respondents that did not have premature baby also were taken heartburn drugs, the data here with $P<0.05$ indicates that there is a significant relationship between using the heartburn or acid reflux drugs and prematurity/mortality (AP4. Table 27). None of the 35 women who used constipation, diarrhea or upset stomach OTC's had premature or mortality child (AP4. Table 28), the data is not enough but according the analysis the $P<0.05$ which indicates that there is a relationship between using this OTC and having a premature or mortality baby.

Only 4 (3.3%) women reported that they had taken medication for allergy, all these had prematurity or mortality child, but we could not determine the relationship between these drugs and prematurity because of the small sample that represent allergic drugs (4 women) but we could say there appears to be relationship the $P<0.05$.

Nullparity is the condition of the women tried to be pregnant and she did not have any child. Out of the 391 that were taken OTCs, 58 (14.8 %) were Nullparity and 333 (85.2 %) were not. (AP5. Table 7) shows the relationship between taking OTCs during pregnancy and Nullparity. All OTCs have no significant effect on Nullparity, where it shows $P>0.05$ (AP5. Table 27).

Gravity indicates the number of times that woman had been pregnant, regardless of whether these pregnancies were continued or not. Out of the 391 respondents, there were 61 (15.6 %), 106 (27.1 %) and 224 (57.3 %) represented 1, 2 and 3 or more gravidity respectively.

The women who used NSAID's, cold, cough or sore throat, constipation, diarrhea or upset stomach or any of the over the counter vitamins showed a relationship with gravidity with a $P<0.05$. But for the ones who used the heartburn or acid reflux OTC's or allergies OTC's, it shows no relationship with a $P>0.05$ (AP5. Table 29).

Safety of drugs intake during pregnancy is a concern for the pregnant. The majority believe that taking OTC is safe but after consulting the physician. AP5. Table 30 shows the relationship between thought of safety of OTC and taking them during pregnancy. Almost all respondents that have taken OTC medications for cold (nasal sprays, Lozenges, pseudoephedrine), gastrointestinal problems (Constipation, diarrhea, or upset stomach) or allergy (diphenhydramine, cetirizine, loratidine), thought of the safety of OTCs during pregnancy with consultation of healthcare professional with $P<0.05$. Out of 183 that taken analgesics, 112 think of the safety of OTCs after consult physician and 11 think of the

safety with checking in the internet, while 60 think of the unsafe of OTCs during pregnancy but still took them with p=0.004.

The results of taking heartburn OTCs and vitamin in relationship of safety are extremely close. Almost all women that think that OTCs are safe or unsafe have taken these medications during pregnancy, there is no relationship between thought of safety and taking gastrointestinal problems medications ($P>0.05$) but taking the vitamins has a relationship of thinking of the OTC's safety ($P<0.05$).

Conclusion

Ultimately, the relationship between age, BMI, level of education and the prevalence use of OTC medication during pregnancy is valid. The people on the higher economic and social status have a higher chance of making it through a pregnancy because of access to knowledge and facilities than those in the lower level. In addition to that, age and education level are the basic and fundamental factors that contribute to proper decision making by expectant mothers.

The present study is the first in identifying predictors of OTC medications use in the Palestinian population. It has sought to find out the problems that are faced by pregnant women due to taking over the counter medication. The there is a clear lack of awareness on which medications to take and which ones to avoid during pregnancy. It shows that OTC's medications may be harmful and can cause prematurity or mortality during pregnancy.

The study has undertaken to find the relationship between age, socioeconomic, level of education and the use of OTC medication during pregnancy and birth issues. It shows a relation between the use of OTC's and age, BMI, the trimester of the pregnancy, smoking, physician and midwives visits and comorbidity but alcohol consumers did not show a relation with the prevalence use of OTC .

A limitation for this study is that the self-reporting use of OTCs could lead to underestimation the prevalence of use, the woman may have used some herbal or drug and she think that is not OTC. Another limitation is that we could not reach to the all areas of Palestine; the results could be more valid if we include all urban and rural areas and more cities in the Palestinian authority.

Recommendations

Results from this study will be presented at the National level and will be shared with the Health Care community and Palestinian Ministry of Health. Based on the results of this research recommendations are made on ways to help pregnant woman make better decision on the use of OTC medications during pregnancy. The study will has evaluated the role of health care professional in OTC medications during pregnancy. Thus the study recommends that:

a. More government programs to be set to educate pregnant mothers on the issue of OTC consumption during pregnancy.
b. The role of healthcare professionals such as pharmacists and physicians should be revaluated and incorporated to information provision. This is because mothers often look for information on the internet and colleagues.
c. There should be laws that prohibit certain drugs to be sold to pregnant mothers because of their potential harm, unless recommended by doctors in very severe and serious cases. Ultimately, further research needs to be carried on the role that alternative sources of information in healthcare of expectant mothers.

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Appendices

Appendix 1 : English version of OTC Use in Pregnancy Questionnaire

-- Current Pregnancy Trimester:

□ 1st (0-3 months) □ 2nd (4-6 months) □ 3rd (7-9 months) □ Other

-- Have any healthcare professional prescribed you any drug (Prescription drugs)

□ Yes □ No

-- If yes what is/are they_____

-- Have you taken any over-the-counter (OTC) medications during your current pregnancy?

□ Yes □ NO

-- If yes, please list the medications you have used _____

Is/they for_____

□ Pain, headache, or fever [like Paracetamol, Ibuprofen, Aspirin]

other_____

□ Cold, cough, or sore throat [nasal sprays, Lozenges, pseudoephedrine]

other_____

□ Heartburn or acid reflux [antacid, famotidine, ranitidine, omeprazole]

other_____

□ Constipation, diarrhea, or upset stomach [laxidin, lopremide]

other_____

□ Allergies [diphenhydramine, cetirizine, loratidine],

other_____

□ Over-the-counter vitamins (Vitamin D, Calcium, Prenatal Vitamin, folic acid.

Any other OTC, herbal, vitamin medications _____

--If you have used OTC medicines while pregnant, who recommended them? (circle all that apply)

□ Physician/Doctor □ Midwife/Nurse

□ Pharmacist □ I chose on my own.

-- Where did you or have you gotten your information about the use of over-the-counter medications during your pregnancy?

□ Physician □ Midwife/nurse □ Pharmacist

□ Internet, Family and friends □ Other_____

-- How safe do you think [OTC, Herbal, Vitamin] are during pregnancy?

□ Very safe, I don't need to talk to a healthcare professional before using.

□ Safe, but I would talk to a healthcare professional before using.

□ Safe, but I would check with resources, such as friends or the Internet, before using.

□ Unsafe, I would not use these during pregnancy.

-- Highest Level of Education:

□ Less than high school □ High school diploma

□ College or technical degree □ 4-year college degree

□ Professional or graduate degree

-- Age _____ years old

-- Residence

□ Ramallah □ Nablus □ Hebron

-- Smoking during pregnancy

□ Smoker □ Non-smoker

-- Body max index_____(kg/m2)

-- Nullparity (7emlat wo nazalat wo ma 3endha awlad)

□ Yes □ No

-- Gravidity (3adad el btoon ma3 elle nezlo)

□ 1 □ 2 □ 3 or more

-- Parity (3adad al-awlad)

□ 0 □ 1 □ 2 □ 3 □ 4 or more

-- General Practitioner visits

□ 0 □ 1 □ 2 □3 or more

-- Extra midwife visits

□ 0 □ 1 □ 2 □ 3 or more

-- Miscarriage

□ Yes □ No

-- Prematurity/mortality

□ Yes □ No

-- Alcohol consumption during pregnancy

□ Yes □ No

-- Comorbidity (e.g. cardiac disease, lung disease and other chronic diseases)

□ Yes □ No

Appendix 2: Arabic version of OTC Use in Pregnancy Questionnaire

Al-Quds University
Faculty of pharmacy
Abu-Dies, Jerusalem

جامعة القدس
كلية الصيدلة
أبوديس – القدس

استخدام الادوية المتاحة بدون وصفة طبية اثناء الحمل

السؤال الأول: مرحلة الحمل الحالية:

1) الثلث الاول (0-3 شهور)
2) الثلث الثاني (4-6 شهور)
3) الثلث الثالث (7-9 شهور)
4) غير ذلك

السؤال الثاني: هل قام اي عامل صحي بوصفك اية دواء (من الأدوية الملزمة بوصفة طبية)؟ 1) نعم 2) لا

السؤال الثالث: إذا كانت اجابتك عن السؤال السابق بنعم، ما الدواء / الادوية التي وصفت لك

.....

السؤال الرابع: هل قمت باستخدام الادوية المتاحة بدون وصفة طبية اثناء فترة حملك الحالية؟ 1) نعم
2) لا

السؤال الخامس: إذا كانت اجابتك عن السؤال السابق بنعم، ما الدواء/الادوية التي قمت باستخدامها؟

.....

السؤال السادس: ما الغرض منه / منهم؟

1) الم،صداع او حمة [براسيتمول، ايبوبروفن، اسبيرين]غيرها .....
2) زكام، سعل او الم بالحلق [رذاذ للانف، اقراص مص دوائية، سودوفيديرين] او غيرها.....
3) الحرقة في المعدة او الحموضة [مضاد الحموضة، رنيتيدين، اومبريزول] او غيرها.....
4) امساك اسهال او الم في المعدة [لاكسيدين، لوبريميد] او غيرها.....
5) الحساسية [دايفنهايدرامين، سيتيريزين، لوراتيدين] او غيرها.....
6) فيتامينات لا تحتاج وصفة طبية[فيتامين د، كالسيوم، فيتامينات ما قبل الولادة، حامض الفوليك، اي دواء آخر لا يحتاج وصفة طبية، اعشاب او ادوية خاصة بالفيتامينات] .....

السؤال السابع: ان قمت باستخدام الادوية المتاحة بدون وصفة طبية اثناء الحمل، فمن وصفها لك ؟ (ارجو اختيار كل ما ينطبق عليك)

1) طبيب 2) قابلة / ممرضة 3) صيدلي 4) اخترت بنفسي

السؤال السابع: كيف علمت كيفية استخدام الادوية المتاحة بدو ن وصفة طبية اثناء حملك؟

1) الطبيب 2) القابلة/الممرضة 3) الصيدلي
4) الانترنت 5) العائلة والاصدقاء 6) مصدر آخر .....

السؤال الثامن: ما مدى امان ادوية الادوية المتاحة المتاحة بدون وصفة طبية، العشبية او الفيتامينات اثناء فترة الحمل؟

1) آمنة جداً ولست بحاجة الى التكلم مع راع صحي قبل استخدامها
2) آمنة ولكن قد استشير اصدقائي او البحث في الانترنت قبل استخدامها.
3) غير آمنة ولا استخدمها اثناء الحمل.

السؤال التاسع: مستوى التعليم:
1) اقل من توجيهي 2) توجيهي 3) كلية او معهد
4) بكالوريس (4 سنوات جامعة) 5) ماجستير 6) دكتوراه

- العمر: ..... سنة
- مكان الاقامة : 1) رام الله 2) نابلس 3) الخليل .....
- التدخين أثناء الحمل: 1) مدخنة 2) غير مدخنة
- الوزن:.....
- الطول:.....
- حالة عدم الولادة (اجهضت وليس لديك اطفال): 1) نعم 2) لا
- حالات الحمل (شامل لعدد مرات الاجهاض): 1 2 3 او اكثر.....
- عدد الاولاد: 1 2 3 4 او اكثر .....
- عدد الزيارات الى الطبيب العام: 0 1 2 3 او اكثر .....
- عدد الزيارات الى القابلة: 0 1 2 3 او اكثر .....
- اجهاض: نعم لا
- ولادة مبكرة/ وفيات: نعم لا
- شرب الكحول اثناء الحمل: نعم لا
- هل عانيت من اعتلال مشترك (كامراض قلبية او رئوية او اية امراض مزمنة اخرى): نعم لا

Appendix 3 : Approval letter for Ministry of Health for the study

Al-Quds University
Faculty of pharmacy
Abu-Dies, Jerusalem

جامعة القدس
كلية الصيدلة
أبوديس – القدس

التاريخ:10/3/2014

الموضوع: رسالة ماجستير حول استخدام الادوية المتاحة بدون وصفة طبية اثناء الحمل

حضرات وزارة الصحة المحترمين:
حضرة السيد اسعد الرملاوي المحترم ،،

تحية طيبة و بعد،،

أرجو من حضرتكم التكرم بالموافقه و تسهيل مهمة الطالبة ملفين الطريفي بجمع المعلومات للموضوع المذكور اعلاه من خلال الاستبيان المرفق في المراكز و المستشفيات التالية:

مجمع فلسطين الطبي/رام الله.
مستشفى رفيديا الحكومي /نابلس.
مستشفى الوطني الحكومي/نابلس.
مستشفى الاهلي /الخليل.
مستشفى عاليه/الخليل.
مراكز الامومه و الطفوله /عيادات الحوامل في المناطق التالية:
رام الله.
البيره.
عين سارة الخليل.
الحاووز/الخليل.
مركز خربثا بني حارث الصحي/رام الله.

و تفضلوا بقبول فائق الاحترام.

الدكتور حسين الحلاق

كلية الصيدلة
Faculty of Pharmacy

Appendix 4 : Cross Tablets and Chi-square testes.

AP4. Table 1: Relationship between age and taking (OTC) medications during current pregnancy.

Age	Have you taken any over-the-counter (OTC) medications during your current pregnancy?				Total	
	Yes		No			
	Frequency	(%)	Frequency	(%)	Frequency	(%)
Less than 20	94	24.0	68	41.5	162	29.2
20-40	265	67.8	87	53.0	352	63.4
40-60	32	8.2	9	5.5	41	7.4
Total	391	100.0	164	100.0	555	100.0

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	17.103[a]	2	.000
Likelihood Ratio	16.553	2	.000
Linear-by-Linear Association	14.669	1	.000
N of Valid Cases	555		

a. 0 cells (.0%) have expected frequency less than 5. The minimum expected frequency is 12.12.

AP4. Table 2: Relationship between body max index and taking (OTC) medications during current pregnancy.

BMI	Have you taken any over-the-counter (OTC) medications during your current pregnancy?				Total	
	Yes		*No*			
	Frequency	(%)	Frequency	(%)	Frequency	(%)
<18.5	0	0.0	2	1.2	2	0.4
18.5-24.9	81	20.7	112	68.3	193	34.8
25-29.9	310	79.3	46	28.0	356	64.1
>30	0	0.0	4	2.4	4	0.7
Total	391	100.0	164	100.0	555	100.0

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	136.793a	3	.000
Likelihood Ratio	137.174	3	.000
Linear-by-Linear Association	105.077	1	.000
N of Valid Cases	555		

AP4. Table 3: Relationship between highest level education and taking (OTC) medications during current pregnancy.

Highest level of Education	Have you taken any over-the-counter (OTC) medications during your current pregnancy?				Total	
	Yes		No			
	Frequency	(%)	Frequency	(%)	Frequency	(%)
Less than high school	102	26.1	69	42.1	171	30.8
High school diploma	69	17.6	37	22.6	106	19.1
College or technical degree	125	32.0	11	6.7	136	24.5
4-year college degree	95	24.3	14	8.5	109	19.6
Professional or graduate degree	0	0.0	33	20.1	33	5.9
Total	391	100.0	164	100.0	555	100.0

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	134.423[a]	4	.000
Likelihood Ratio	145.993	4	.000
Linear-by-Linear Association	1.098	1	.295
N of Valid Cases	555		

a. 0 cells (.0%) have expected frequency less than 5. The minimum expected frequency is 9.75.

AP4. Table 4 : Relationship between current pregnancy trimester and taking (OTC) medications during current pregnancy.

Current Pregnancy Trimester	Have you taken any over-the-counter (OTC) medications during your current pregnancy?				Total	
	Yes		No			
	Frequency	(%)	Frequency	(%)	Frequency	(%)
0-3 months	38	9.7	16	9.8	54	9.7
4-6 months	195	49.9	1	0.6	196	35.3
7-9 months	158	40.4	147	89.6	305	55.0
Total	391	100.0	164	100.0	555	100.0

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	130.339[a]	2	.000
Likelihood Ratio	173.164	2	.000
Linear-by-Linear Association	63.085	1	.000
N of Valid Cases	555		

a. 0 cells (.0%) have expected frequency less than 5. The minimum expected frequency is 15.96.

AP4. Table 5: Relationship between miscarriage and taking (OTC) medications during current pregnancy.

Miscarriage	Have you taken any over-the-counter (OTC) medications during your current pregnancy?				Total	
	Yes		No			
	Frequency	(%)	Frequency	(%)	Frequency	(%)
Yes	157	40.2	37	22.6	194	35.0
No	234	59.8	127	77.4	361	65.0
Total	391	100.0	164	100.0	555	100.0

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	15.727[a]	1	.000		
Continuity Correction[b]	14.963	1	.000		
Likelihood Ratio	16.453	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	15.699	1	.000		
N of Valid Cases	555				

a. 0 cells (.0%) have expected frequency less than 5. The minimum expected frequency is 57.33.
b. Computed only for a 2x2 table

AP4. Table 6: Relationship between prematurity or mortality and taking (OTC) medications during current pregnancy.

Prematurity/ mortality	Have you taken any over-the-counter (OTC) medications during your current pregnancy?				Total	
	Yes		No			
	Frequency	(%)	Frequency	(%)	Frequency	(%)
Yes	123	31.5	9	5.5	132	23.8
No	268	68.5	155	94.5	423	76.2
Total	391	100.0	164	100.0	555	100.0

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	42.988[a]	1	.000		
Continuity Correction[b]	41.567	1	.000		
Likelihood Ratio	52.211	1	.000		
isher's Exact Test				.000	.000
Linear-by-Linear Association	42.910	1	.000		
N of Valid Cases	555				

a. 0 cells (.0%) have expected frequency less than 5. The minimum expected frequency is 39.01.
b. Computed only for a 2x2 table

AP4. Table 7: Relationship between nullparity and taking (OTC) medications during current pregnancy.

Nullparity	Have you taken any over-the-counter (OTC) medications during your current pregnancy?				Total	
	Yes		No			
	Frequency	(%)	Frequency	(%)	Frequency	(%)
Yes	58	14.8	0	0.0	58	10.5
No	333	85.2	164	100.0	497	89.5
Total	391	100.0	164	100.0	555	100.0

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	27.166[a]	1	.000		
Continuity Correction[b]	25.604	1	.000		
Likelihood Ratio	43.410	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	27.117	1	.000		
N of Valid Cases	555				

a. 0 cells (.0%) have expected frequency less than 5. The minimum expected frequency is 17.14.
b. Computed only for a 2x2 table

AP4. Table 8 : Relationship between gravidity and taking (OTC) medications during current pregnancy.

Gravidity	Have you taken any over-the-counter (OTC) medications during your current pregnancy?				Total	
	Yes		No			
	Frequency	(%)	Frequency	(%)	Frequency	(%)
1	61	15.6	94	57.3	155	27.9
2	106	27.1	0	0.0	106	19.1
3 or more	224	57.3	70	42.7	294	53.0
Total	391	100.0	164	100.0	555	100.0

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	121.107[a]	2	.000
Likelihood Ratio	143.235	2	.000
Linear-by-Linear Association	49.023	1	.000
N of Valid Cases	555		

a. 0 cells (.0%) have expected frequency less than 5. The minimum expected frequency is 31.32.

AP4. Table 9 : Relationship between parity and taking (OTC) medications during current pregnancy.

Parity	Have you taken any over-the-counter (OTC) medications during your current pregnancy?				Total	
	Yes		No			
	Frequency	(%)	Frequency	(%)	Frequency	(%)
0	79	20.2	2	1.2	81	14.6
1	78	19.9	13	7.9	91	16.4
2	96	24.6	43	26.2	139	25.0
3	42	10.7	58	35.4	100	18.0
4 or more	96	24.6	48	29.3	144	25.9
Total	391	100.0	164	100.0	555	100.0

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	78.718[a]	4	.000
Likelihood Ratio	89.032	4	.000
Linear-by-Linear Association	42.731	1	.000
N of Valid Cases	555		

a. 0 cells (.0%) have expected frequency less than 5. The minimum expected frequency is 23.94.

AP4. Table 10: Relationship between smoking and taking (OTC) medications during current pregnancy.

Smoking during pregnancy	Have you taken any over-the-counter (OTC) medications during your current pregnancy?				Total	
	Yes		No			
	Frequency	(%)	Frequency	(%)	Frequency	(%)
Yes	178	45.5	19	11.6	197	35.5
No	213	54.5	145	88.4	358	64.5
Total	391	100.0	164	100.0	555	100.0

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	58.125[a]	1	.000		
Continuity Correction[b]	56.652	1	.000		
Likelihood Ratio	65.492	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	58.020	1	.000		
N of Valid Cases	555				

a. 0 cells (.0%) have expected frequency less than 5. The minimum expected frequency is 58.21.
b. Computed only for a 2x2 table

AP4. Table 11: Relationship between alcohol consumption and taking (OTC) medications during current pregnancy.

Alcohol consumption during pregnancy	Have you taken any over-the-counter (OTC) medications during your current pregnancy?				Total	
	Yes		No			
	Frequency	(%)	Frequency	(%)	Frequency	(%)
Yes	4	1.0	2	1.2	6	1.1
No	387	99.0	162	98.8	549	98.9
Total	391	100.0	164	100.0	555	100.0

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.042[a]	1	.838		
Continuity Correction[b]	.000	1	1.000		
Likelihood Ratio	.041	1	.840		
Fisher's Exact Test				1.000	.571
Linear-by-Linear Association	.042	1	.838		
N of Valid Cases	555				

a. 2 cells (50.0%) have expected frequency less than 5. The minimum expected frequency is 1.77.
b. Computed only for a 2x2 table

AP4. Table 12: Relationship between general practitioner visits and taking (OTC) medications during current pregnancy.

General Practitioner visits	Have you taken any over-the-counter (OTC) medications during your current pregnancy?				Total	
	Yes		No			
	Frequency	(%)	Frequency	(%)	Frequency	(%)
0	0	0.0	29	17.7	29	5.2
1	46	11.8	7	4.3	53	9.5
2	45	11.5	100	61.0	145	26.1
3 or more	300	76.7	28	17.1	328	59.1
Total	391	100.0	164	100.0	555	100.0

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	253.721[a]	3	.000
Likelihood Ratio	261.433	3	.000
Linear-by-Linear Association	118.965	1	.000
N of Valid Cases	555		

a. 0 cells (.0%) have expected frequency less than 5. The minimum expected frequency is 8.57.

AP4. Table 13: Relationship between extra midwife visits and taking (OTC) medications during current pregnancy.

Extra midwife visits	Have you taken any over-the-counter (OTC) medications during your current pregnancy?				Total	
	Yes		No			
	Frequency	(%)	Frequency	(%)	Frequency	(%)
0	345	88.2	15	9.1	360	64.9
1	10	2.6	41	25.0	51	9.2
2	0	0.0	22	13.4	22	4.0
3 or more	36	9.2	86	52.4	122	22.0
Total	391	100.0	164	100.0	555	100.0

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	325.431[a]	3	.000
Likelihood Ratio	350.560	3	.000
Linear-by-Linear Association	240.042	1	.000
N of Valid Cases	555		

a. 0 cells (.0%) have expected frequency less than 5. The minimum expected frequency is 6.50.

AP4. Table 14: Relationship between comorbidity (e.g. cardiac disease, lung disease and other chronic diseases) and taking (OTC) medications during current pregnancy.

Comorbidity (e.g. cardiac disease, lung disease and other chronic diseases)	Have you taken any over-the-counter (OTC) medications during your current pregnancy?				Total	
	Yes		No			
	Frequency	(%)	Frequency	(%)	Frequency	(%)
Yes	25	6.4	46	28.0	71	12.8
No	366	93.6	118	72.0	484	87.2
Total	391	100.0	164	100.0	555	100.0

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	48.565[a]	1	.000		
Continuity Correction[b]	46.643	1	.000		
Likelihood Ratio	43.998	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	48.477	1	.000		
N of Valid Cases	555				

a. 0 cells (.0%) have expected frequency less than 5. The minimum expected frequency is 20.98.

b. Computed only for a 2x2 table

AP4. Table 15: Relationship between prescribed drugs by healthcare professional and taking (OTC) medications during current pregnancy.

Have any healthcare professional prescribed you any drug (Prescription drugs)	Have you taken any over-the-counter (OTC) medications during your current pregnancy?				Total	
	Yes		No			
	Frequency	(%)	Frequency	(%)	Frequency	(%)
Yes	197	50.4	54	32.9	251	45.2
No	194	49.6	110	67.1	304	54.8
Total	391	100.0	164	100.0	555	100.0

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	14.213[a]	1	.000		
Continuity Correction[b]	13.517	1	.000		
Likelihood Ratio	14.466	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	14.188	1	.000		
N of Valid Cases	555				

a. 0 cells (.0%) have expected frequency less than 5. The minimum expected frequency is 74.17.
b. Computed only for a 2x2 table

AP4. Table 16: Relationship between the number of prescribed drugs and taking (OTC) medications during current pregnancy.

If yes what is/are they_____	Have you taken any over-the-counter (OTC) medications during your current pregnancy?				Total	
	Yes		No			
	Frequency	(%)	Frequency	(%)	Frequency	(%)
1	126	64.0	54	100.0	180	71.7
2	71	36.0	0	0.0	71	28.3
Total	197	100.0	54	100.0	251	100.0

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	27.139[a]	1	.000		
Continuity Correction[b]	25.391	1	.000		
Likelihood Ratio	41.474	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	27.030	1	.000		
N of Valid Cases	251				

a. 0 cells (.0%) have expected frequency less than 5. The minimum expected frequency is 15.27.
b. Computed only for a 2x2 table

AP4. Table 17: Distribution of the healthcare professional recommended OTC medication.

Who recommended OTC?	Frequency	(%)
Physician / Doctor	323	82.6
Midwife/Nurse	48	12.3
Pharmacist	4	1.0
I chose on my own	16	4.1
Total	391	100.0

Chi-Square Tests

	Value
Pearson Chi-Square	.[a]
N of Valid Cases	391

a. No statistics are computed because Have you taken any over-the-counter (OTC) medications during your current pregnancy? is a constant.

AP4. Table 18: Where did you or have you gotten your information about the use of over-the-counter medications during your pregnancy * Have you taken any over-the-Counter (OTC) medications during your current pregnancy?

Where did you or have you gotten your information about the use of over-the-counter medications during your pregnancy	Frequency	(%)
Physician / Doctor	36	9.2
Midwife/Nurse	3	0.8
Pharmacist	325	83.1
Internet, Family and friends	27	6.9
Total	391	100.0

Chi-Square Tests

	Value
Pearson Chi-Square	.[a]
N of Valid Cases	391

a. No statistics are computed because Have you taken any over-the-counter (OTC) medications during your current pregnancy? is a constant.

AP4. Table 19: Relationship between taking paracetamol, Ibuprofen or aspirin during pregnancy and miscarriage occurrence.

Paracetamol, Ibuprofen and aspirin	Miscarriage				Total	
	Yes		No			
	Frequency	(%)	Frequency	(%)	Frequency	(%)
Yes	67	42.7	116	49.6	183	46.8
No	90	57.3	118	50.4	208	53.2
Total	157	100.0	234	100.0	391	100.0

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. 1-sided)
Pearson Chi-Square	1.795[a]	1	.180		
Continuity Correction[b]	1.529	1	.216		
Likelihood Ratio	1.799	1	.180		
Fisher's Exact Test				.215	.108
Linear-by-Linear Association	1.791	1	.181		
N of Valid Cases	391				

a. 0 cells (.0%) have expected frequency less than 5. The minimum expected frequency is 73.48.
b. Computed only for a 2x2 table

AP4. Table 20: Relationship between taking cold, cough, or sore throat [nasal sprays, Lozenges, pseudoephedrine]during pregnancy and miscarriage occurrence.

Cold, cough, or sore throat [nasal sprays, Lozenges, pseudoephedrine]	Miscarriage				Total	
	Yes		No			
	Frequency	(%)	Frequency	(%)	Frequency	(%)
Yes	3	1.9	6	2.6	9	2.3
No	154	98.1	228	97.4	382	97.7
Total	157	100.0	234	100.0	391	100.0

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.178[a]	1	.673		
Continuity Correction[b]	.006	1	.938		
Likelihood Ratio	.182	1	.669		
Fisher's Exact Test				.746	.478
Linear-by-Linear Association	.178	1	.673		
N of Valid Cases	391				

a. 1 Cells (25.0%) have expected frequency less than 5. The minimum expected frequency is 3.61.
b. Computed only for a 2x2 table

AP4. Table 21: Relationship between heartburn or acid reflux drugs [antacid, famotidine, ranitidine, omeprazole] during pregnancy and miscarriage occurrence.

Heartburn or acid reflux [antacid, famotidine, ranitidine, omeprazole]	Miscarriage				Total	
	Yes		No			
	Frequency	(%)	Frequency	(%)	Frequency	(%)
Yes	154	98.1	228	97.4	382	97.7
No	3	1.9	6	2.6	9	2.3
Total	157	100.0	234	100.0	391	100.0

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.178[a]	1	.673		
Continuity Correction[b]	.006	1	.938		
Likelihood Ratio	.182	1	.669		
Fisher's Exact Test				.746	.478
Linear-by-Linear Association	.178	1	.673		
N of Valid Cases	391				

a. 1 Cells (25.0%) have expected frequency less than 5. The minimum expected Frequency is 3.61.
b. Computed only for a 2x2 table

AP4. Table 22: Relationship between Constipation, diarrhea, or upset stomach drugs [laxidin, lopremide] during pregnancy and miscarriage occurrence.

Constipation, diarrhea, or upset stomach [laxidin, lopremide]	Miscarriage				Total	
	Yes		No			
	Frequency	(%)	Frequency	(%)	Frequency	(%)
Yes	6	3.8	29	12.4	35	9.0
No	151	96.2	205	87.6	356	91.0
Total	157	100.0	234	100.0	391	100.0

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	8.470[a]	1	.004		
Continuity Correction[b]	7.451	1	.006		
Likelihood Ratio	9.410	1	.002		
Fisher's Exact Test				.003	.002
Linear-by-Linear Association	8.448	1	.004		
N of Valid Cases	391				

a. 0 cells (.0%) have expected frequency less than 5. The minimum expected frequency is 14.05.
b. Computed only for a 2x2 table

AP4. Table 23: Relationship between allergies drugs [[diphenhydramine, cetirizine, loratidine] during pregnancy and miscarriage occurrence.

Allergies [diphenhydramine, cetirizine, loratidine]	Miscarriage				Total	
	Yes		No			
	Frequency	(%)	Frequency	(%)	Frequency	(%)
Yes	1	0.6	3	1.3	4	1.0
No	156	99.4	231	98.7	387	99.0
Total	157	100.0	234	100.0	391	100.0

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.386[a]	1	.534		
Continuity Correction[b]	.012	1	.913		
Likelihood Ratio	.411	1	.522		
Fisher's Exact Test				.652	.472
Linear-by-Linear Association	.385	1	.535		
N of Valid Cases	391				

a. 2 cells (50.0%) have expected frequency less than 5. The minimum expected frequency is 1.61.

b. Computed only for a 2x2 table

AP4. Table 24: Relationship between Over-the-counter vitamins (vitamin D, calcium, prenatal vitamin, folic acid) during pregnancy and miscarriage occurrence.

Over-the-counter vitamins (Vitamin D, Calcium, Prenatal Vitamin, folic acid)	Miscarriage				Total	
	Yes		No			
	Frequency	(%)	Frequency	(%)	Frequency	(%)
Yes	154	98.1	229	97.9	383	98.0
No	3	1.9	5	2.1	8	2.0
Total	157	100.0	234	100.0	391	100.0

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.024[a]	1	.877		
Continuity Correction[b]	.000	1	1.000		
Likelihood Ratio	.024	1	.877		
Fisher's Exact Test				1.000	.591
Linear-by-Linear Association	.024	1	.877		
N of Valid Cases	391				

a. 2 cells (50.0%) have expected frequency less than 5. The minimum expected frequency is 3.21.

b. Computed only for a 2x2 table

AP4 . Table 25 : Relationship between taking paracetamol, ibuprofen or aspirin during pregnancy and prematurity or mortality occurrence.

Paracetamol, ibuprofen, aspirin	Prematurity/mortality				Total	
	Yes		No			
	Frequency	(%)	Frequency	(%)	Frequency	(%)
Yes	10	8.1	173	64.6	183	46.8
No	113	91.9	95	35.4	208	53.2
Total	123	100.0	268	100.0	391	100.0

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	107.796[a]	1	.000		
Continuity Correction[b]	105.542	1	.000		
Likelihood Ratio	122.592	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	107.520	1	.000		
N of Valid Cases	391				

a. 0 cells (.0%) have expected Frequency less than 5. The minimum expected Frequency is 57.57.
b. Computed only for a 2x2 table

AP4. Table 26: Relationship between taking Cold, cough, or sore throat drugs [nasal sprays, Lozenges, pseudoephedrine] during pregnancy and prematurity or mortality occurrence.

Cold, cough, or sore throat [nasal sprays, Lozenges, pseudoephedrine]	Prematurity/mortality				Total	
	Yes		No			
	Frequency	(%)	Frequency	(%)	Frequency	(%)
Yes	0	0.0	9	3.4	9	2.3
No	123	100.0	259	96.6	382	97.7
Total	123	100.0	268	100.0	391	100.0

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	4.228[a]	1	.040		
Continuity Correction[b]	2.866	1	.090		
Likelihood Ratio	6.896	1	.009		
Fisher's Exact Test				.062	.032
Linear-by-Linear Association	4.217	1	.040		
N of Valid Cases	391				

a. 1 cells (25.0%) have expected Frequency less than 5. The minimum expected Frequency is 2.83.
b. Computed only for a 2x2 table

AP4. Table 27: Relationship between taking heartburn or acid reflux drugs [antacid, famotidine, ranitidine, omeprazole] during pregnancy and prematurity or mortality occurrence.

Heartburn or acid reflux [antacid, famotidine, ranitidine, omeprazole]	Prematurity/mortality				Total	
	Yes		No			
	Frequency	(%)	Frequency	(%)	Frequency	(%)
Yes	114	92.7	268	100.0	382	97.7
No	9	7.3	0	0.0	9	2.3
Total	123	100.0	268	100.0	391	100.0

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	20.072[a]	1	.000		
Continuity Correction[b]	16.950	1	.000		
Likelihood Ratio	21.284	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	20.020	1	.000		
N of Valid Cases	391				

a. 1 cells (25.0%) have expected frequency less than 5. The minimum expected frequency is 2.83.
b. Computed only for a 2x2 table

AP4. Table 28: Relationship between taking constipation, diarrhea, or upset stomach drugs [laxidin, lopremide] during pregnancy and prematurity or mortality occurrence.

Constipation, diarrhea, or upset stomach [laxidin, lopremide]	Prematurity/mortality				Total	
	Yes		No			
	Frequency	(%)	Frequency	(%)	Frequency	(%)
Yes	0	0.0	35	13.1	35	9.0
No	123	100.0	233	86.9	356	91.0
Total	123	100.0	268	100.0	391	100.0

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	17.643[a]	1	.000		
Continuity Correction[b]	16.077	1	.000		
Likelihood Ratio	27.994	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	17.598	1	.000		
N of Valid Cases	391				

a. 0 cells (.0%) have expected frequency less than 5. The minimum expected frequency is 11.01.
b. Computed only for a 2x2 table

AP4. Table 29: Relationship between taking allergies drugs [diphenhydramine, cetirizine, loratidine] during pregnancy and prematurity or mortality occurrence.

Allergies [diphenhydramine, cetirizine, loratidine]	Prematurity/mortality				Total	
	Yes		No			
	Frequency	(%)	Frequency	(%)	Frequency	(%)
Yes	4	3.3	0	0.0	4	1.0
No	119	96.7	268	100.0	387	99.0
Total	123	100.0	268	100.0	391	100.0

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	8.806[a]	1	.003		
Continuity Correction[b]	5.887	1	.015		
Likelihood Ratio	9.343	1	.002		
Fisher's Exact Test				.009	.009
Linear-by-Linear Association	8.783	1	.003		
N of Valid Cases	391				

a. 2 cells (50.0%) have expected frequency less than 5. The minimum expected frequency is 1.26.
b. Computed only for a 2x2 table

AP4. Table 30: Relationship between taking over-the-counter vitamins (vitamin D, calcium, prenatal vitamin, folic acid) during pregnancy and prematurity or mortality occurrence.

Over-the-counter vitamins (Vitamin D, Calcium, Prenatal Vitamin, folic acid)	Prematurity/mortality				Total	
	Yes		No			
	Frequency	(%)	Frequency	(%)	Frequency	(%)
Yes	123	100.0	260	97.0	383	98.0
No	0	0.0	8	3.0	8	2.0
Total	123	100.0	268	100.0	391	100.0

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	3.748[a]	1	.053		
Continuity Correction[b]	2.407	1	.121		
Likelihood Ratio	6.120	1	.013		
Fisher's Exact Test				.061	.047
Linear-by-Linear Association	3.739	1	.053		
N of Valid Cases	391				

a. 1 cells (25.0%) have expected frequency less than 5. The minimum expected frequency is 2.52.
b. Computed only for a 2x2 table

AP4. Table 31: Relationship between taking paracetamol, ibuprofen or aspirin during pregnancy and Nullparity.

Paracetamol, ibuprofen, aspirin	Nullparity				Total	
	Yes		No			
	Frequency	(%)	Frequency	(%)	Frequency	(%)
Yes	32	55.2	151	45.3	183	46.8
No	26	44.8	182	54.7	208	53.2
Total	58	100.0	333	100.0	391	100.0

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1.916[a]	1	.166		
Continuity Correction[b]	1.542	1	.214		
Likelihood Ratio	1.912	1	.167		
Fisher's Exact Test				.199	.107
Linear-by-Linear Association	1.911	1	.167		
N of Valid Cases	391				

a. 0 cells (.0%) have expected frequency less than 5. The minimum expected frequency is 27.15.
b. Computed only for a 2x2 table

AP4. Table 32: Relationship between taking Cold, cough, or sore throat drugs [nasal sprays, Lozenges, pseudoephedrine] during pregnancy and Nullparity.

Cold, cough, or sore throat [nasal sprays, Lozenges, pseudoephedrine]	Nullparity				Total	
	Yes		No			
	Frequency	(%)	Frequency	(%)	Frequency	(%)
Yes	2	3.4	7	2.1	9	2.3
No	56	96.6	326	97.9	382	97.7
Total	58	100.0	333	100.0	391	100.0

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.398[a]	1	.528		
Continuity Correction[b]	.024	1	.876		
Likelihood Ratio	.355	1	.551		
Fisher's Exact Test				.628	.396
Linear-by-Linear Association	.397	1	.529		
N of Valid Cases	391				

a. 1 Cells (25.0%) have expected frequency less than 5. The minimum expected frequency is 1.34.
b. Computed only for a 2x2 table

AP4. Table 33: Relationship between taking heartburn or acid reflux drugs [antacid, famotidine, ranitidine, omeprazole] during pregnancy and Nullparity.

Heartburn or acid reflux [antacid, famotidine, ranitidine, omeprazole]	Nullparity				Total	
	Yes		No			
	Frequency	(%)	Frequency	(%)	Frequency	(%)
Yes	55	94.8	327	98.2	382	97.7
No	3	5.2	6	1.8	9	2.3
Total	58	100.0	333	100.0	391	100.0

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	2.496[a]	1	.114		
Continuity Correction[b]	1.222	1	.269		
Likelihood Ratio	1.977	1	.160		
Fisher's Exact Test				.135	.135
Linear-by-Linear Association	2.489	1	.115		
N of Valid Cases	391				

a. 1 cells (25.0%) have expected frequency less than 5. The minimum expected frequency is 1.34.
b. Computed only for a 2x2 table

AP4. Table 34: Relationship between taking constipation, diarrhea, or upset stomach drugs [laxidin, lopremide] during pregnancy and Nullparity.

Constipation, diarrhea, or upset stomach [laxidin, lopremide]	Nullparity				Total	
	Yes		No			
	Frequency	(%)	Frequency	(%)	Frequency	(%)
Yes	5	8.6	30	9.0	35	9.0
No	53	91.4	303	91.0	356	91.0
Total	58	100.0	333	100.0	391	100.0

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.009[a]	1	.924		
Continuity Correction[b]	.000	1	1.000		
Likelihood Ratio	.009	1	.923		
Fisher's Exact Test				1.000	.580
Linear-by-Linear Association	.009	1	.924		
N of Valid Cases	391				

a. 0 cells (.0%) have expected frequency less than 5. The minimum expected frequency is 5.19.
b. Computed only for a 2x2 table

AP4. Table 35: Relationship between taking allergies drugs [diphenhydramine, cetirizine, loratidine] during pregnancy and Nullparity.

Allergies [diphenhydramine, cetirizine, loratidine]	Nullparity				Total	
	Yes		No			
	Frequency	(%)	Frequency	(%)	Frequency	(%)
Yes	0	0.0	4	1.2	4	1.0
No	58	100.0	329	98.8	387	99.0
Total	58	100.0	333	100.0	391	100.0

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.704[a]	1	.401		
Continuity Correction[b]	.017	1	.895		
Likelihood Ratio	1.292	1	.256		
Fisher's Exact Test				1.000	.525
Linear-by-Linear Association	.702	1	.402		
N of Valid Cases	391				

a. 2 cells (50.0%) have expected frequency less than 5. The minimum expected frequency is .59.
b. Computed only for a 2x2 table

AP4. Table 36: Relationship between taking over-the-counter vitamins (vitamin D, calcium, prenatal vitamin, folic acid) during pregnancy and Nullparity.

Over-the-counter vitamins (Vitamin D, Calcium, Prenatal Vitamin, folic acid)	Nullparity				Total	
	Yes		No			
	Frequency	(%)	Frequency	(%)	Frequency	(%)
Yes	56	96.6	327	98.2	383	98.0
No	2	3.4	6	1.8	8	2.0
Total	58	100.0	333	100.0	391	100.0

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.668[a]	1	.414		
Continuity Correction[b]	.099	1	.753		
Likelihood Ratio	.576	1	.448		
Fisher's Exact Test				.338	.338
Linear-by-Linear Association	.666	1	.414		
N of Valid Cases	391				

a. 1 Cells (25.0%) have expected frequency less than 5. The minimum expected frequency is 1.19.
b. Computed only for a 2x2 table

AP4. Table 37: Relationship between taking paracetamol, ibuprofen or aspirin during pregnancy and Gravidity.

Paracetamo, ibuprofen, aspirin	Gravidity						Total	
	1		2		3 or more			
	Frequency	(%)	Frequency	(%)	Frequency	(%)	Frequency	(%)
Yes	54	88.5	35	33.0	94	42.0	183	46.8
No	7	11.5	71	67.0	130	58.0	208	53.2
Total	61	100.0	106	100.0	224	100.0	391	100.0

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	52.843[a]	2	.000
Likelihood Ratio	57.775	2	.000
Linear-by-Linear Association	24.306	1	.000
N of Valid Cases	391		

a. 0 Cells (.0%) have expected frequency less than 5. The minimum expected frequency is 28.55.

AP4. Table 38: Relationship between taking cold, cough, or sore throat drugs [nasal sprays, Lozenges, pseudoephedrine] during pregnancy and Gravidity.

Cold, cough, or sore throat [nasal sprays, Lozenges, pseudoephedrine]	Gravidity						Total	
	1		2		3 or more			
	Frequency	(%)	Frequency	(%)	Frequency	(%)	Frequency	(%)
Yes	5	8.2	0	0.0	4	1.8	9	2.3
No	56	91.8	106	100.0	220	98.2	382	97.7
Total	61	100.0	106	100.0	224	100.0	391	100.0

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	12.189[a]	2	.002
Likelihood Ratio	10.954	2	.004
Linear-by-Linear Association	4.614	1	.032
N of Valid Cases	391		

a. 2 Cells (33.3%) have expected frequency less than 5. The minimum expected frequency is 1.40.

AP4. Table 39: Relationship between taking heartburn or acid reflux drugs [antacid, famotidine, ranitidine, omeprazole] during pregnancy and Gravidity.

Heartburn or acid reflux [antacid, famotidine, ranitidine, omeprazole]	Gravidity						Total	
	1		2		3 or more			
	Frequency	(%)	Frequency	(%)	Frequency	(%)	Frequency	(%)
Yes	59	96.7	104	98.1	219	97.8	382	97.7
No	2	3.3	2	1.9	5	2.2	9	2.3
Total	61	100.0	106	100.0	224	100.0	391	100.0

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.345[a]	2	.842
Likelihood Ratio	.320	2	.852
Linear-by-Linear Association	.116	1	.734
N of Valid Cases	391		

a. 2 Cells (33.3%) have expected Frequency less than 5. The minimum expected Frequency is 1.40.

AP4. Table 40: Relationship between taking constipation, diarrhea, or upset stomach drugs [laxidin, lopremide] during pregnancy and Gravidity.

Constipation, diarrhea, or upset stomach [laxidin, lopremide]	Gravidity						Total	
	1		2		3 or more			
	Frequency	(%)	Frequency	(%)	Frequency	(%)	Frequency	(%)
Yes	18	29.5	0	0.0	17	7.6	35	9.0
No	43	70.5	106	100.0	207	92.4	356	91.0
Total	61	100.0	106	100.0	224	100.0	391	100.0

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	42.560[a]	2	.000
Likelihood Ratio	41.352	2	.000
Linear-by-Linear Association	13.706	1	.000
N of Valid Cases	391		

a. 0 Cells (.0%) have expected frequency less than 5. The minimum expected frequency is 5.46.

AP4. Table 41: Relationship between taking allergies drugs [diphenhydramine, cetirizine, loratidine] during pregnancy and Gravidity.

Allergies [diphenhydramine, cetirizine, loratidine]	Gravidity						Total	
	1		2		3 or more			
	Frequency	(%)	Frequency	(%)	Frequency	(%)	Frequency	(%)
Yes	0	0.0	2	1.9	2	0.9	4	1.0
No	61	100.0	104	98.1	222	99.1	387	99.0
Total	61	100.0	106	100.0	224	100.0	391	100.0

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.449[a]	2	.485
Likelihood Ratio	1.919	2	.383
Linear-by-Linear Association	.050	1	.823
N of Valid Cases	391		

a. 3 Cells (50.0%) have expected frequency less than 5. The minimum expected frequency is .62.

AP4. Table 42: Relationship between taking over-the-counter vitamins (vitamin D, calcium, prenatal vitamin, folic acid) during pregnancy and Gravidity.

Over-the-counter vitamins (Vitamin D, Calcium, Prenatal Vitamin, folic acid)	Gravidity						Total	
	1		2		3 or more			
	Frequency	(%)	Frequency	(%)	Frequency	(%)	Frequency	(%)
Yes	56	91.8	106	100.0	221	98.7	383	98.0
No	5	8.2	0	0.0	3	1.3	8	2.0
Total	61	100.0	106	100.0	224	100.0	391	100.0

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	14.287[a]	2	.001
Likelihood Ratio	11.633	2	.003
Linear-by-Linear Association	6.526	1	.011
N of Valid Cases	391		

a. 3 Cells (50.0%) have expected frequency less than 5. The minimum expected frequency is 1.25.

AP4. Table 43: Relationship between taking paracetamol, ibuprofen or aspirin during pregnancy and the thought of how safe [OTC, Herbal, Vitamin] are during pregnancy.

Paracetamol, ibuprofen, aspirin	How safe do you think [OTC, Herbal, Vitamin] are during pregnancy?						Total	
	Safe, but I would talk to a healthcare professional before using		Safe, but I would check with resources, such as friends or the Internet, before using		Unsafe, I would not use these during pregnancy.			
	Frequency	(%)	Frequency	(%)	Frequency	(%)	Frequency	(%)
Yes	112	54.6	11	44.0	60	37.3	183	46.8
No	93	45.4	14	56.0	101	62.7	208	53.2
Total	205	100.0	25	100.0	161	100.0	391	100.0

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	11.009[a]	2	.004
Likelihood Ratio	11.082	2	.004
Linear-by-Linear Association	10.945	1	.001
N of Valid Cases	391		

a. 0 Cells (.0%) have expected frequency less than 5. The minimum expected frequency is 11.70.

AP4. Table 44: Relationship between taking cold, cough, or sore throat drugs [nasal sprays, Lozenges, pseudoephedrine] during pregnancy and the thought of how safe [OTC, Herbal, Vitamin] are during pregnancy.

Cold, cough, or sore throat [nasal sprays, Lozenges, pseudoephedrine]	How safe do you think [OTC, Herbal, Vitamin] are during pregnancy?						Total	
	Safe, but I would talk to a healthcare professional before using		Safe, but I would check with resources, such as friends or the Internet, before using		Unsafe, I would not use these during pregnancy.			
	Frequency	(%)	Frequency	(%)	Frequency	(%)	Frequency	(%)
Yes	9	4.4	0	0.0	0	0.0	9	2.3
No	196	95.6	25	100.0	161	100.0	382	97.7
Total	205	100.0	25	100.0	161	100.0	391	100.0

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.358[a]	2	.015
Likelihood Ratio	11.815	2	.003
Linear-by-Linear Association	7.837	1	.005
N of Valid Cases	391		

a. 3 Cells (50.0%) have expected frequency less than 5. The minimum expected frequency is .58.

AP4. Table 45 : Relationship between taking heartburn or acid reflux drugs [antacid, famotidine, ranitidine, omeprazole] during pregnancy and the thought of how safe [OTC, Herbal, Vitamin] are during pregnancy.

Heartburn or acid reflux [antacid, famotidine, ranitidine, omeprazole]	How safe do you think [OTC, Herbal, Vitamin] are during pregnancy?						Total	
	Safe, but I would talk to a healthcare professional before using		Safe, but I would check with resources, such as friends or the Internet, before using		Unsafe, I would not use these during pregnancy.			
	Frequency	(%)	Frequency	(%)	Frequency	(%)	Frequency	(%)
Yes	198	96.6	25	100.0	159	98.8	382	97.7
No	7	3.4	0	0.0	2	1.2	9	2.3
Total	205	100.0	25	100.0	161	100.0	391	100.0

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.522[a]	2	.283
Likelihood Ratio	3.112	2	.211
Linear-by-Linear Association	1.953	1	.162
N of Valid Cases	391		

a. 3 Cells (50.0%) have expected frequency less than 5. The minimum expected frequency is .58.

AP4. Table 46: Relationship between taking constipation, diarrhea, or upset stomach drugs [laxidin, lopremide] during pregnancy and the thought of how safe [OTC, Herbal, Vitamin] are during pregnancy.

Constipation, diarrhea, or upset stomach [laxidin, lopremide]	How safe do you think [OTC, Herbal, Vitamin] are during pregnancy?						Total	
	Safe, but I would talk to a healthcare professional before using		Safe, but I would check with resources, such as friends or the Internet, before using		Unsafe, I would not use these during pregnancy.			
	Frequency	(%)	Frequency	(%)	Frequency	(%)	Frequency	(%)
Yes	35	17.1	0	0.0	0	0.0	35	9.0
No	170	82.9	25	100.0	161	100.0	356	91.0
Total	205	100.0	25	100.0	161	100.0	391	100.0

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	34.878[a]	2	.000
Likelihood Ratio	48.316	2	.000
Linear-by-Linear Association	32.704	1	.000
N of Valid Cases	391		

a. 1 Cells (16.7%) have expected frequency less than 5. The minimum expected frequency is 2.24.

AP4. Table 47: Relationship between taking allergies drugs [diphenhydramine, cetirizine, loratidine] during pregnancy and the thought of how safe [OTC, Herbal, Vitamin] are during pregnancy.

Allergies [diphenhydramine, cetirizine, loratidine]	How safe do you think [OTC, Herbal, Vitamin] are during pregnancy?						Total	
	Safe, but I would talk to a healthcare professional before using		Safe, but I would check with resources, such as friends or the Internet, before using		Unsafe, I would not use these during pregnancy.			
	Frequency	(%)	Frequency	(%)	Frequency	(%)	Frequency	(%)
Yes	3	1.5	0	0.0	1	0.6	4	1.0
No	202	98.5	25	100.0	160	99.4	387	99.0
Total	205	100.0	25	100.0	161	100.0	391	100.0

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.908[a]	2	.635
Likelihood Ratio	1.159	2	.560
Linear-by-Linear Association	.655	1	.418
N of Valid Cases	391		

a. 3 cells (50.0%) have expected frequency less than 5. The minimum expected frequency is .26.

AP4. Table 48: Relationship between taking Over-the-counter vitamins (vitamin D, calcium, prenatal vitamin, folic acid) during pregnancy and the thought of how safe [OTC, Herbal, Vitamin] are during pregnancy.

Over-the-counter vitamins (Vitamin D, Calcium, Prenatal Vitamin, folic acid)	How safe do you think [OTC, Herbal, Vitamin] are during pregnancy?						Total	
	Safe, but I would talk to a healthcare professional before using		Safe, but I would check with resources, such as friends or the Internet, before using		Unsafe, I would not use these during pregnancy.			
	Frequency	(%)	Frequency	(%)	Frequency	(%)	Frequency	(%)
Yes	197	96.1	25	100.0	161	100.0	383	98.0
No	8	3.9	0	0.0	0	0.0	8	2.0
Total	205	100.0	25	100.0	161	100.0	391	100.0

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.410[a]	2	.025
Likelihood Ratio	10.483	2	.005
Linear-by-Linear Association	6.948	1	.008
N of Valid Cases	391		

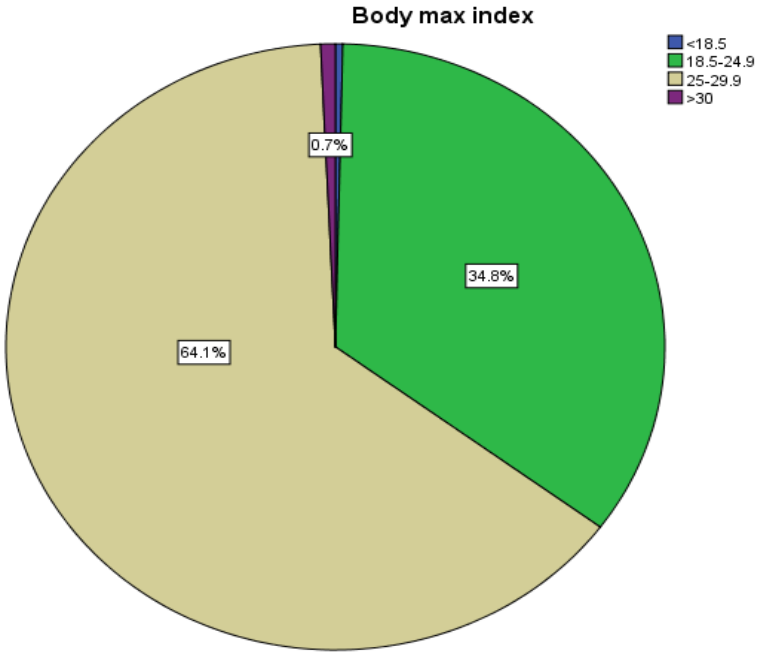
a. 3 cells (50.0%) have expected frequency less than 5. The minimum expected frequency is .51.

Appendix 5 : Distribution Tables and Figures

AP5. Table 1 . Distribution of body max index among respondents.

BMI	Frequency	%	Valid Percent	Cumulative Percent
<18.5	2	0.4	0.4	0.4
18.5-24.9	193	34.8	34.8	35.1
25-29.9	356	64.1	64.1	99.3
>30	4	0.7	0.7	100.0
Total	555	100.0	100.0	

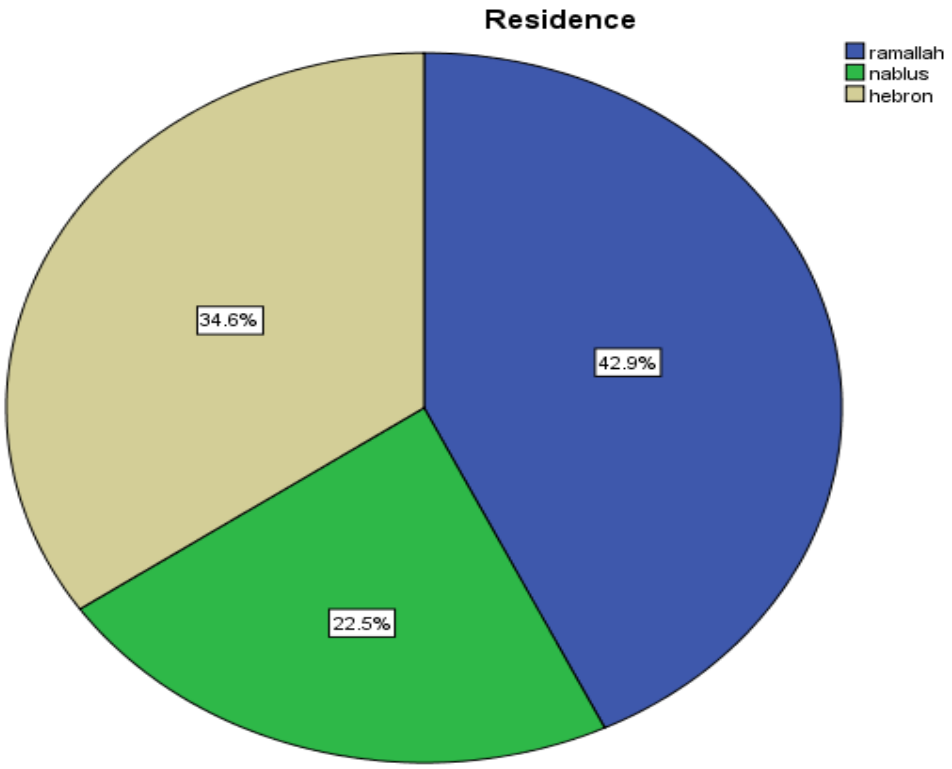
AP5 .Figure 1: The percentage of Body Max Index among respondents



AP 5. Table 2. Distribution of residence among respondents.

Residence	Frequency	%	Valid Percent	Cumulative Percent
Ramallah	238	42.9	42.9	42.9
Nablus	125	22.5	22.5	65.4
Hebron	192	34.6	34.6	100.0
Total	555	100.0	100.0	

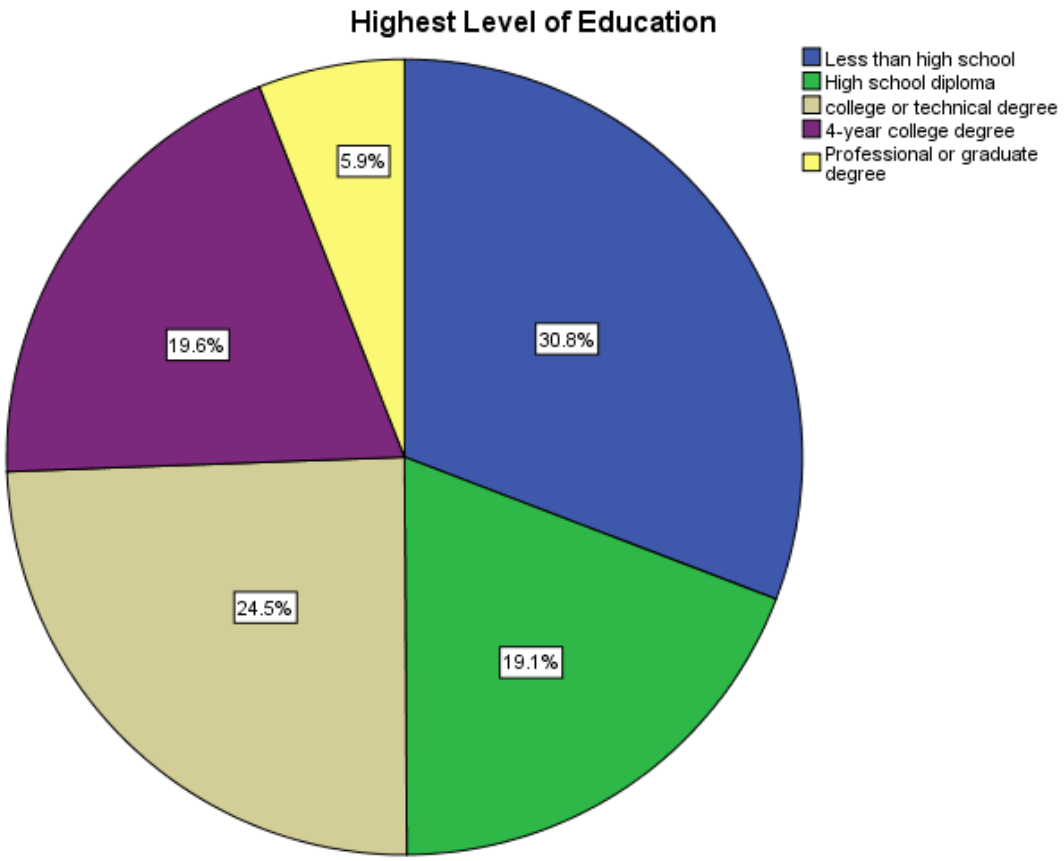
AP5. Figure 2: The percentage of Residence among respondents.



AP5. Table 3: Distribution of highest level of education among respondents.

Highest Level of Education	Frequency	%	Valid Percent	Cumulative Percent
Less than high school	171	30.8	30.8	30.8
High school diploma	106	19.1	19.1	49.9
college or technical degree	136	24.5	24.5	74.4
4-year college degree	109	19.6	19.6	94.1
Professional or graduate degree	33	5.9	5.9	100.0
Total	555	100.0	100.0	

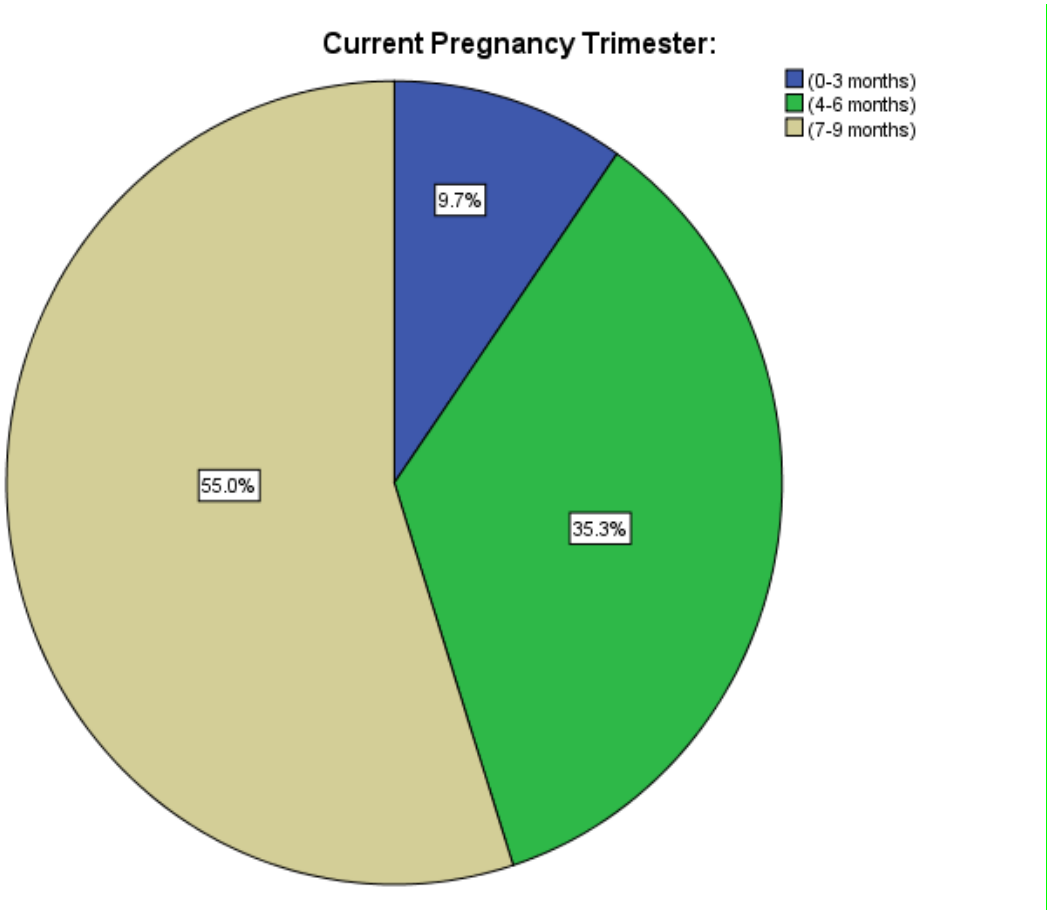
AP5. Figure 3: The percentage of Higher Level Education among respondents.



AP5. Table 4: Distribution of current pregnancy trimester among respondents.

Current Pregnancy Trimester	Frequency	%	Valid Percent	Cumulative Percent
(0-3 months)	54	9.7	9.7	9.7
(4-6 months)	196	35.3	35.3	45.0
(7-9 months)	305	55.0	55.0	100.0
Total	555	100.0	100.0	

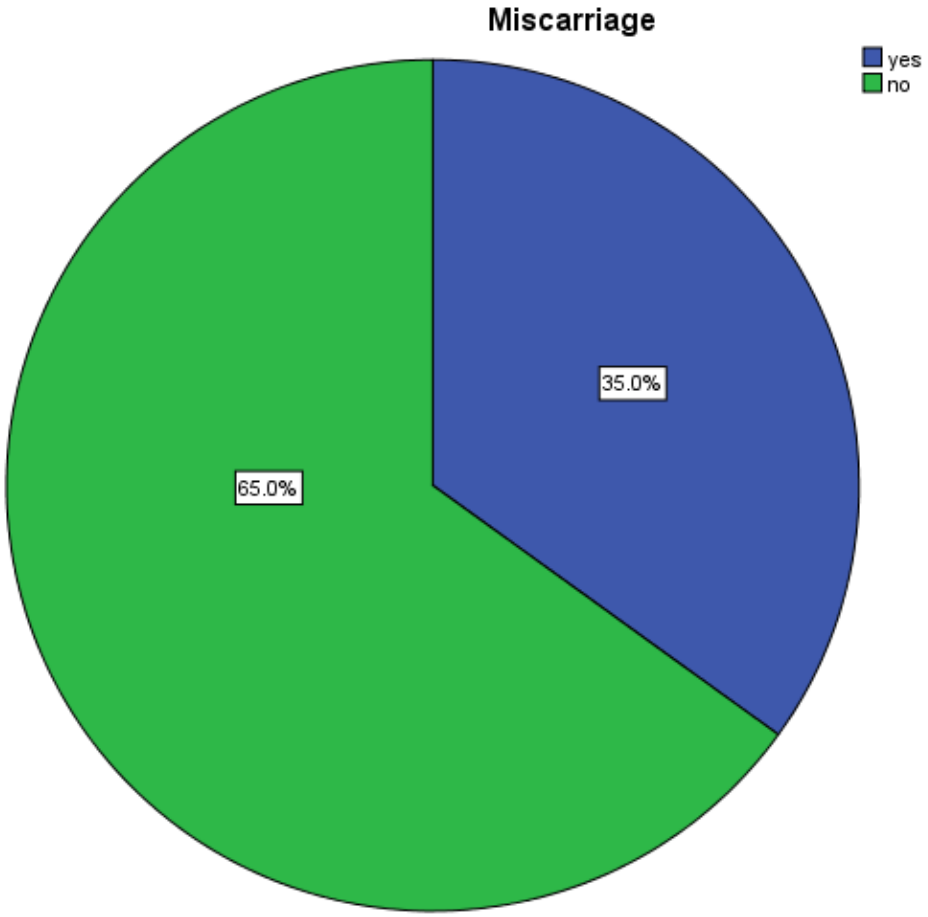
AP5. Figure 4: The percentage of Current Pregnancy Trimester among respondents.



AP5. Table 5: Distribution of miscarriage among respondents.

Miscarriage	Frequency	%	Valid Percent	Cumulative Percent
Yes	194	35.0	35.0	35.0
No	361	65.0	65.0	100.0
Total	555	100.0	100.0	

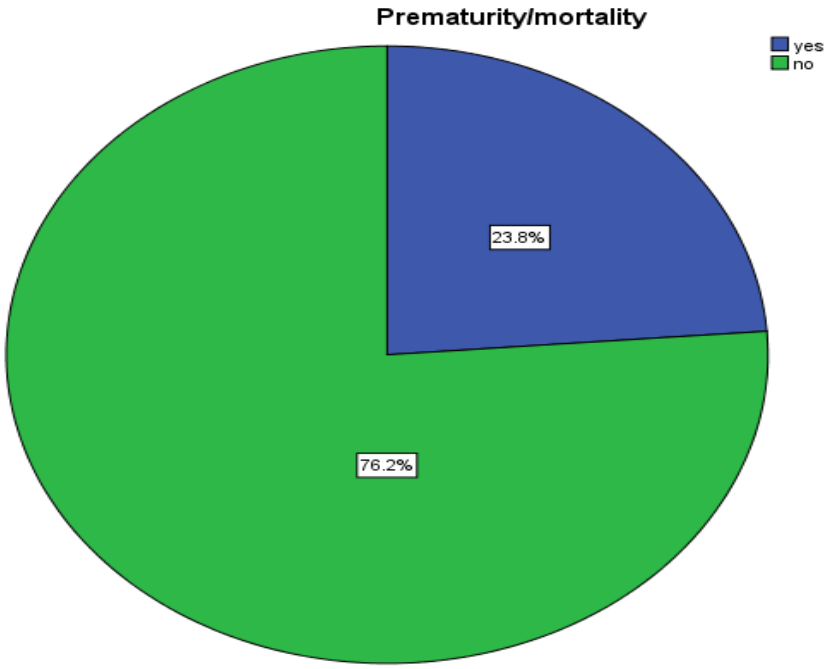
AP5. Figure 5: The percentage of miscarriage among respondents.



AP5.Table 6: Distribution of prematurity/mortality among respondents.

Prematurity/ mortality	Frequency	%	Valid Percent	Cumulative Percent
Yes	132	23.8	23.8	23.8
No	423	76.2	76.2	100.0
Total	555	100.0	100.0	

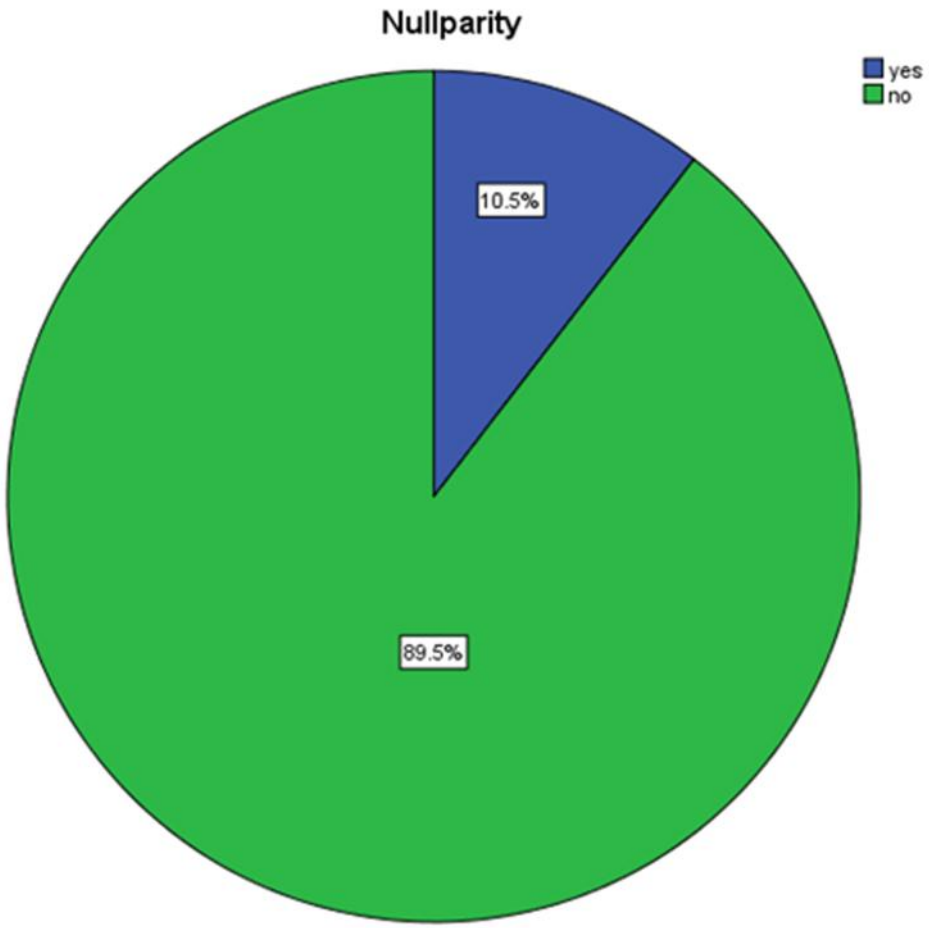
AP5. Figure 6: The percentage of Prematurity/ Mortality among respondents.



AP5. Table 7: Distribution of Nullparity among respondents.

Nullparity	Frequency	%	Valid Percent	Cumulative Percent
Yes	58	10.5	10.5	10.5
No	497	89.5	89.5	100.0
Total	555	100.0	100.0	

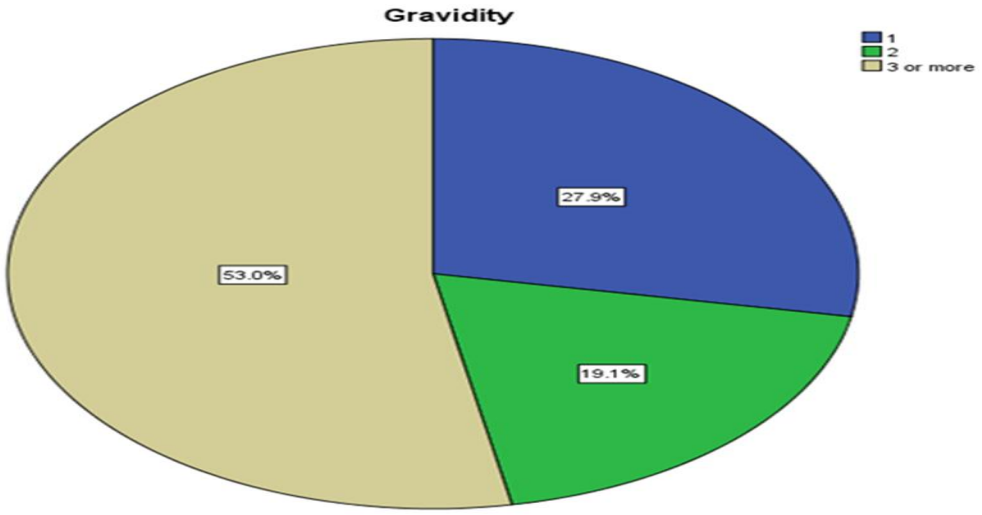
AP5. Figure 7: The percentage of nullparity among respondents.



AP5. Table 8: Distribution of gravidity among respondents.

Gravidity	Frequency	%	Valid Percent	Cumulative Percent
1	155	27.9	27.9	27.9
2	106	19.1	19.1	47.0
3 or more	294	53.0	53.0	100.0
Total	555	100.0	100.0	

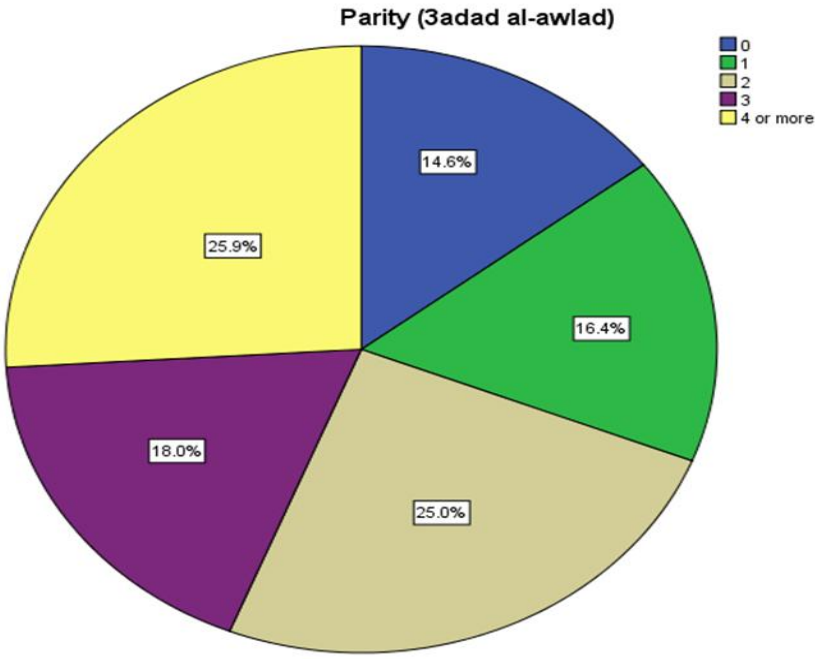
AP5. Figure 8: The percentage of gravidity among respondents.



AP5. Table 9: Distribution of Parity among respondents.

Parity	Frequency	%	Valid Percent	Cumulative Percent
0	81	14.6	14.6	14.6
1	91	16.4	16.4	31.0
2	139	25.0	25.0	56.0
3	100	18.0	18.0	74.1
4 or more	144	25.9	25.9	100.0
Total	555	100.0	100.0	

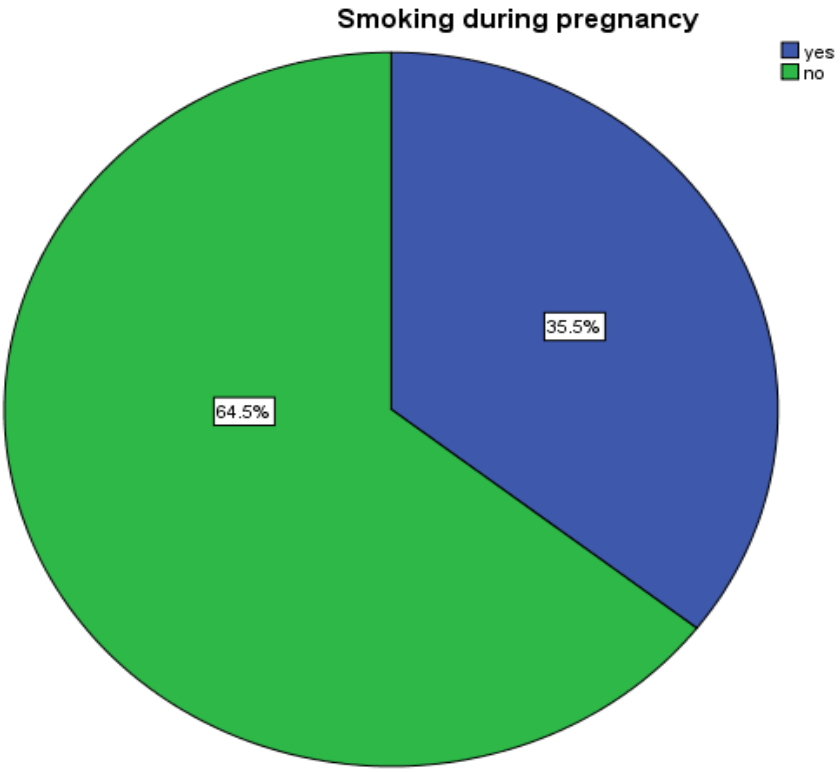
AP5. Figure 9: The percentage of parity among respondents.



AP5. Table 10: Distribution of Smokers during pregnancy among respondents.

Smoking during pregnancy	Frequency	%	Valid Percent	Cumulative Percent
Yes	197	35.5	35.5	35.5
No	358	64.5	64.5	100.0
Total	555	100.0	100.0	

AP5. Figure 10: The percentage of smoking during pregnancy among respondents.



AP5. Table 11: Distribution of alcohol consumers during pregnancy among respondents.

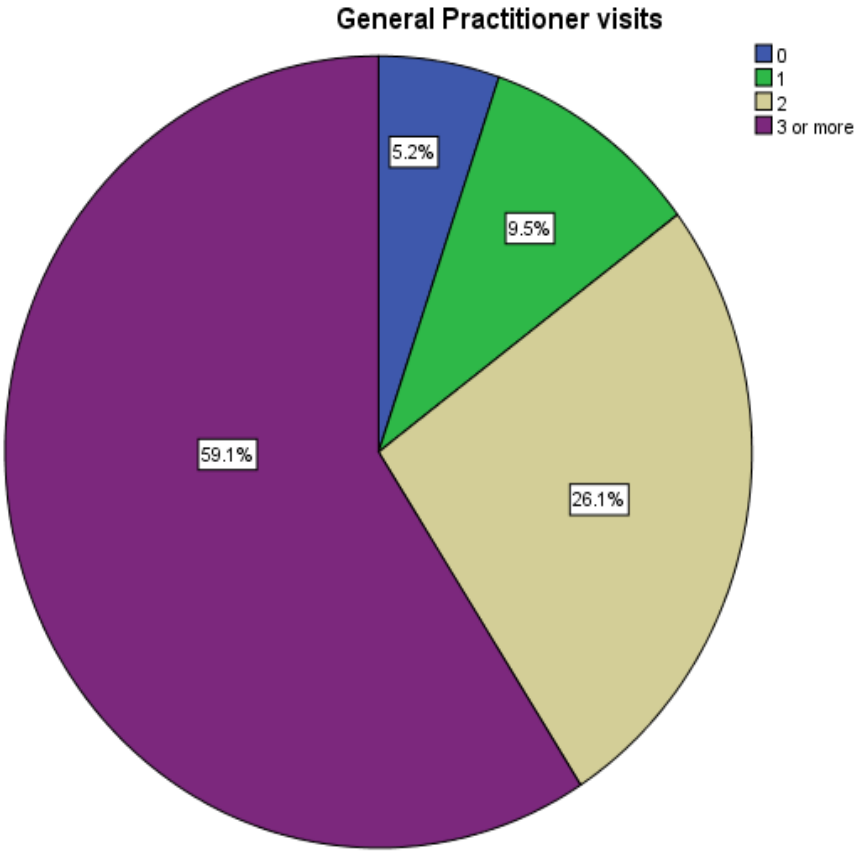
Alcohol consumption during pregnancy	Frequency	%	Valid Percent	Cumulative Percent
Yes	6	1.1	1.1	1.1
No	549	98.9	98.9	100.0
Total	555	100.0	100.0	

AP5. Figure 11: The percentage of alcohol consumers during pregnancy among respondents.

AP5. Table 12: distribution of general practitioner visits among respondents.

General Practitioner Visits	Frequency	%	Valid Percent	Cumulative Percent
0	29	5.2	5.2	5.2
1	53	9.5	9.5	14.8
2	145	26.1	26.1	40.9
3 or more	328	59.1	59.1	100.0
Total	555	100.0	100.0	

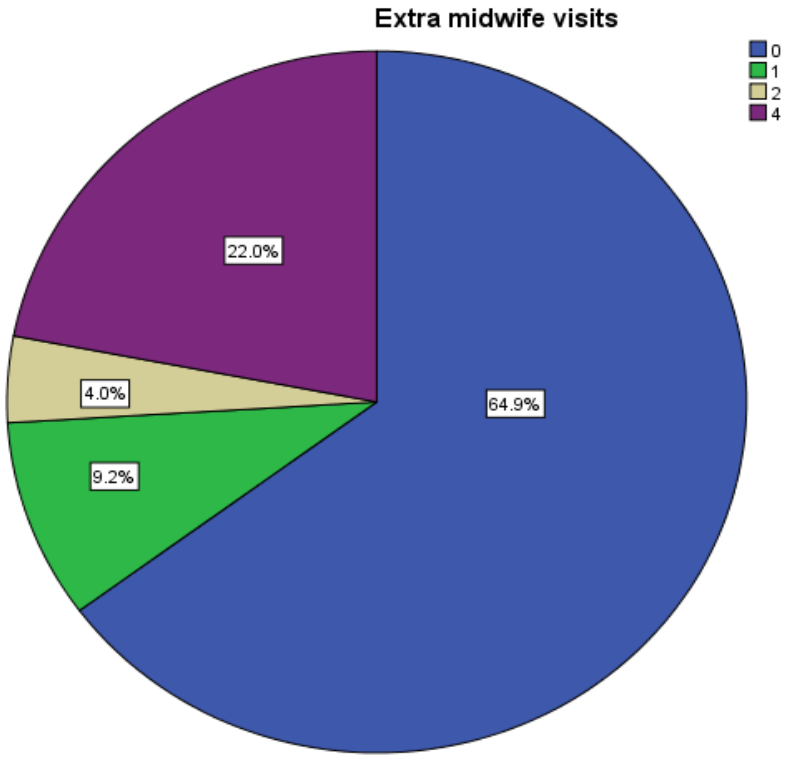
AP5. Figure 12: The percentage of numbers of general practitioner visits during pregnancy among respondents.



AP5. Table 13: Distribution of extra midwife visits during pregnancy among respondents.

Extra midwife visits	Frequency	Percent	Valid Percent	Cumulative Percent
0	360	64.9	64.9	64.9
1	51	9.2	9.2	74.1
2	22	4.0	4.0	78.0
4	122	22.0	22.0	100.0
Total	555	100.0	100.0	

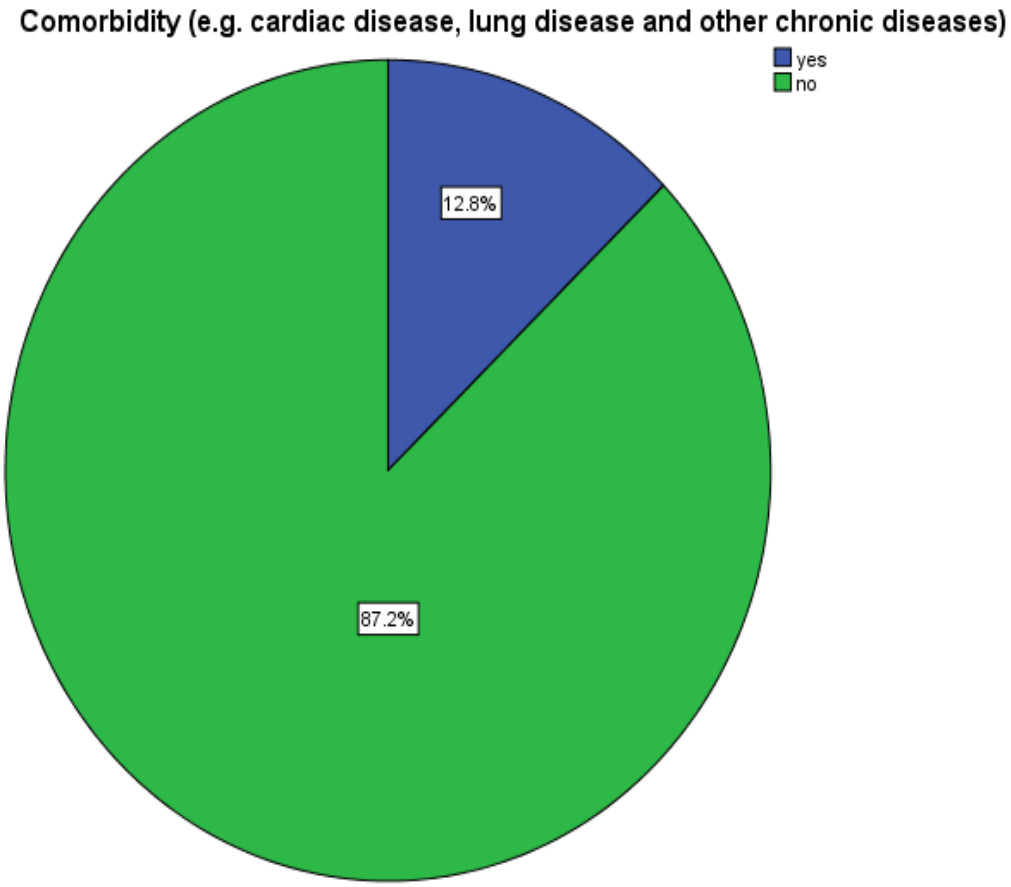
AP5. Figure 13: The percentage of numbers of extra midwife visits during pregnancy among respondents.



AP5. Table 14: Distribution of comorbidity (e.g. cardiac disease, lung disease and other chronic diseases) among respondents.

Comorbidity	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	71	12.8	12.8	12.8
No	484	87.2	87.2	100.0
Total	555	100.0	100.0	

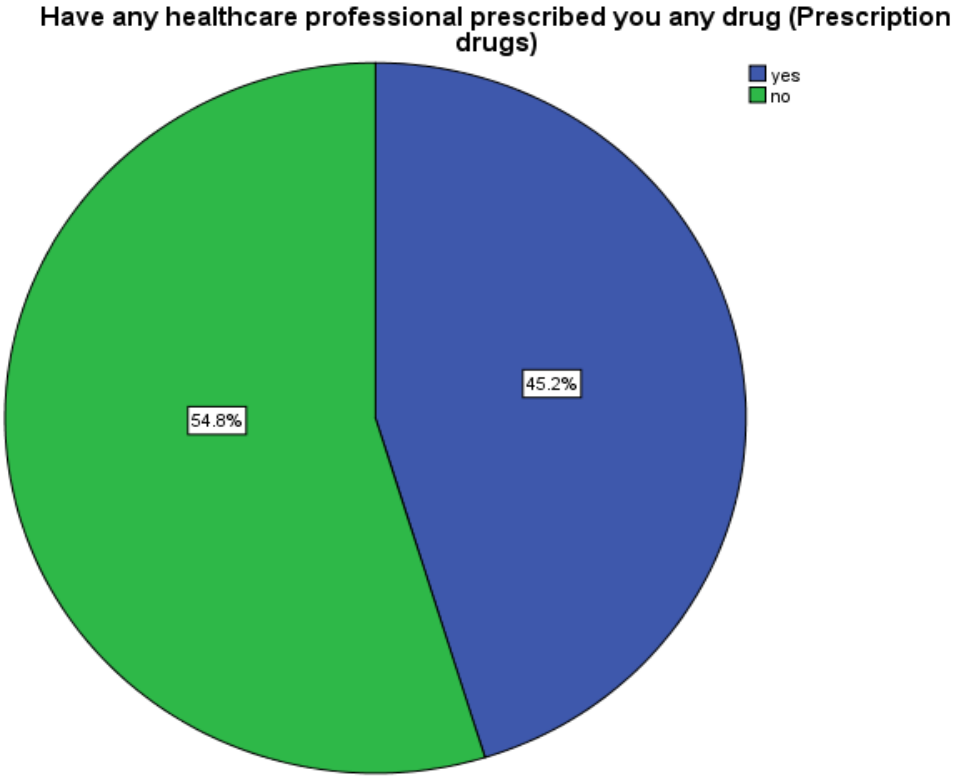
AP5. Figure 14: The percentage of comorbidity among respondents.



AP5. Table 15: Distribution of take prescribed drugs by healthcare professionals

Have any healthcare professional prescribed you any drug (Prescription drugs)	Frequency	%	Valid Percent	Cumulative Percent
Yes	251	45.2	45.2	45.2
No	304	54.8	54.8	100.0
Total	555	100.0	100.0	

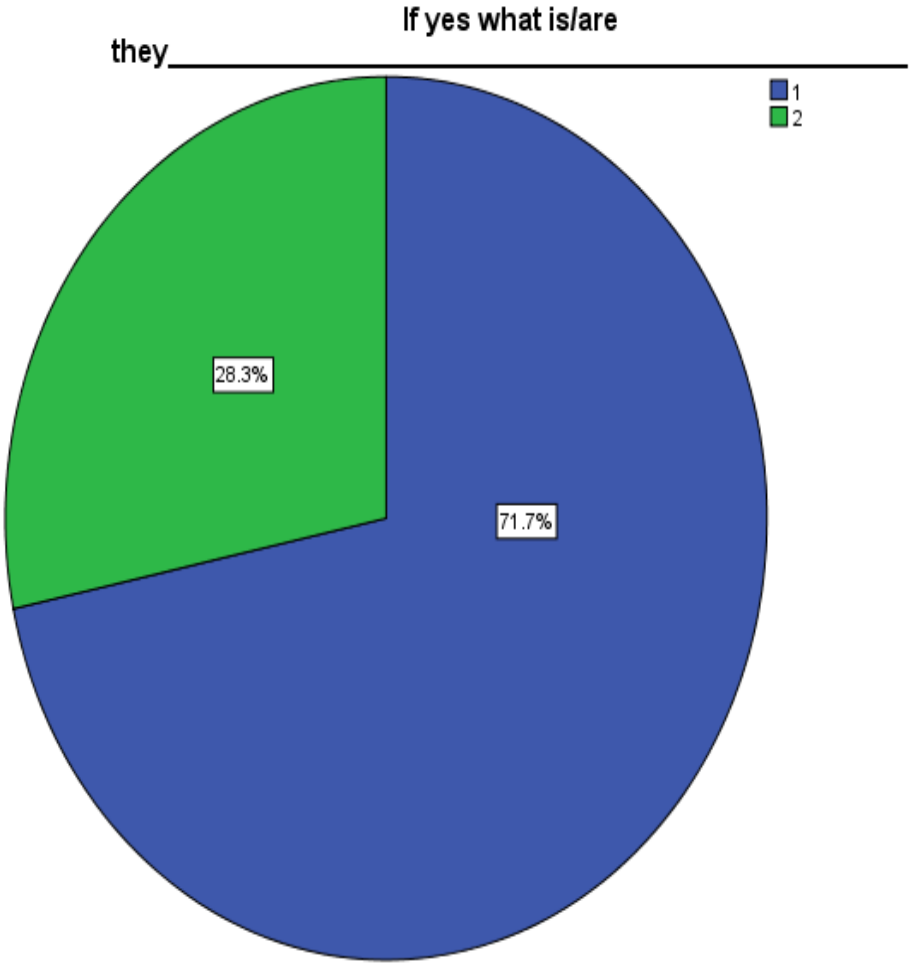
AP5. Figure 15: The percentage of taken prescribed drugs by healthcare professionals among respondents.



AP5. Table 16 : If yes what is/are they

	Frequency	%	Valid Percent	Cumulative Percent
1	180	71.7	71.7	71.7
2	71	28.3	28.3	100.0
Total	251	100.0	100.0	

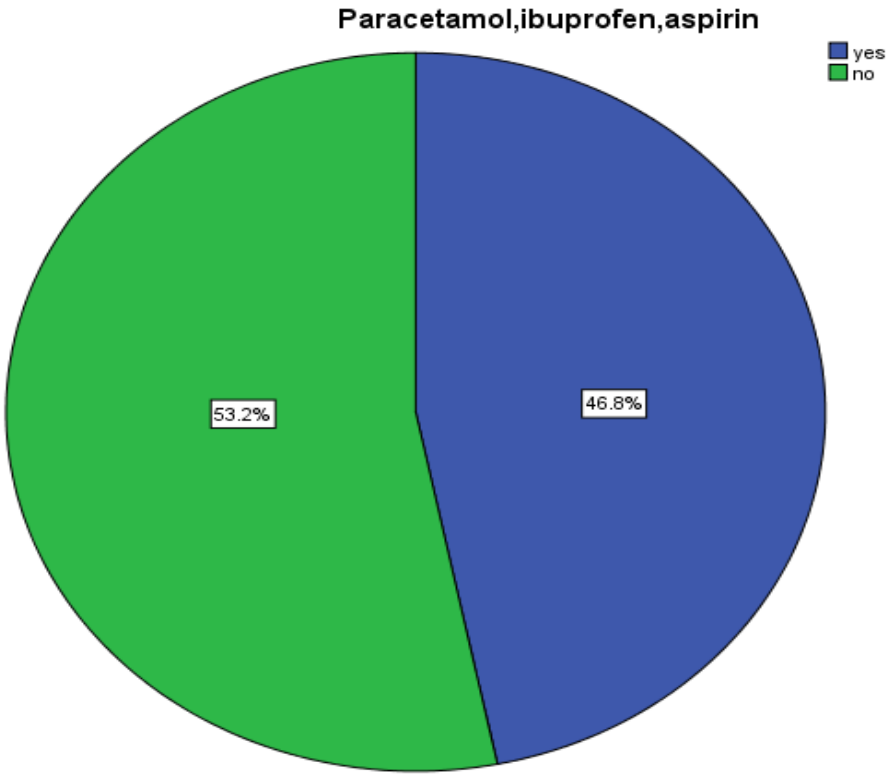
AP5. Figure 16: The percentage of If yes what she is/ are they among respondents.



AP5. Table 17: Taken paracetamol, ibuprofen or aspirin during your current pregnancy among respondents.

Paracetamol, ibuprofen or aspirin	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	183	46.8	46.8	46.8
No	208	53.2	53.2	100.0
Total	391	100.0	100.0	

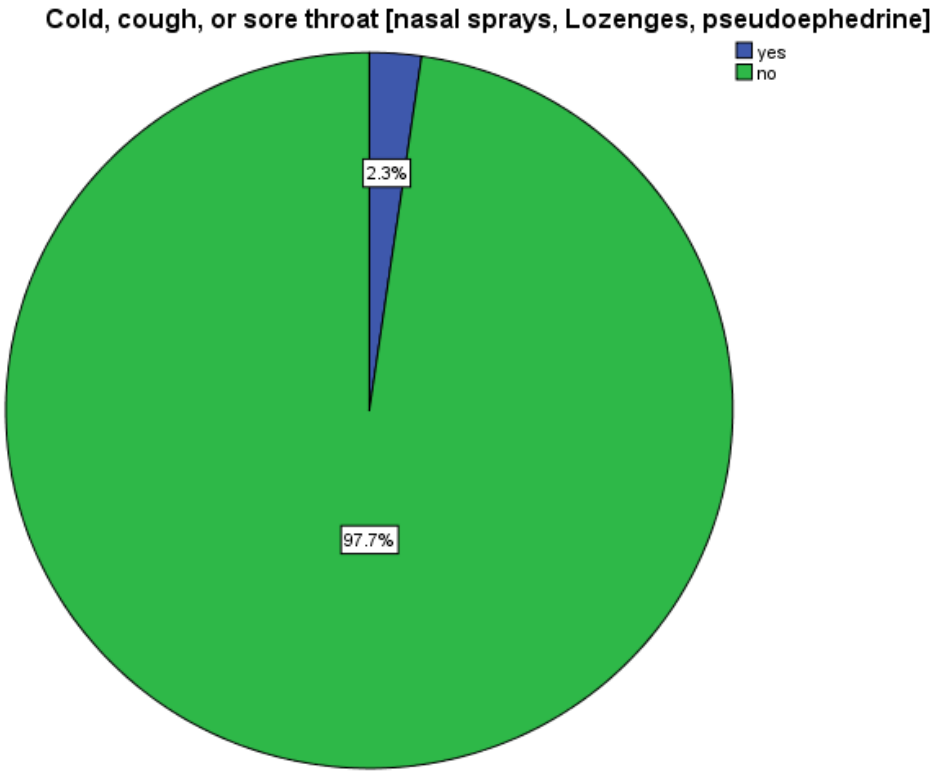
AP5. Figure 17 The percentage of taken paracetamol, ibuprofen or aspirin during current pregnancy among respondents.



AP5. Table 18: Taken Cold, cough, or sore throat drugs [nasal sprays, Lozenges, pseudoephedrine] during your current pregnancy among respondents.

Cold, cough, or sore throat drugs [nasal sprays, Lozenges, pseudoephedrine]	Frequency	%	Valid Percent	Cumulative Percent
Yes	9	2.3	2.3	2.3
No	382	97.7	97.7	100.0
Total	391	100.0	100.0	

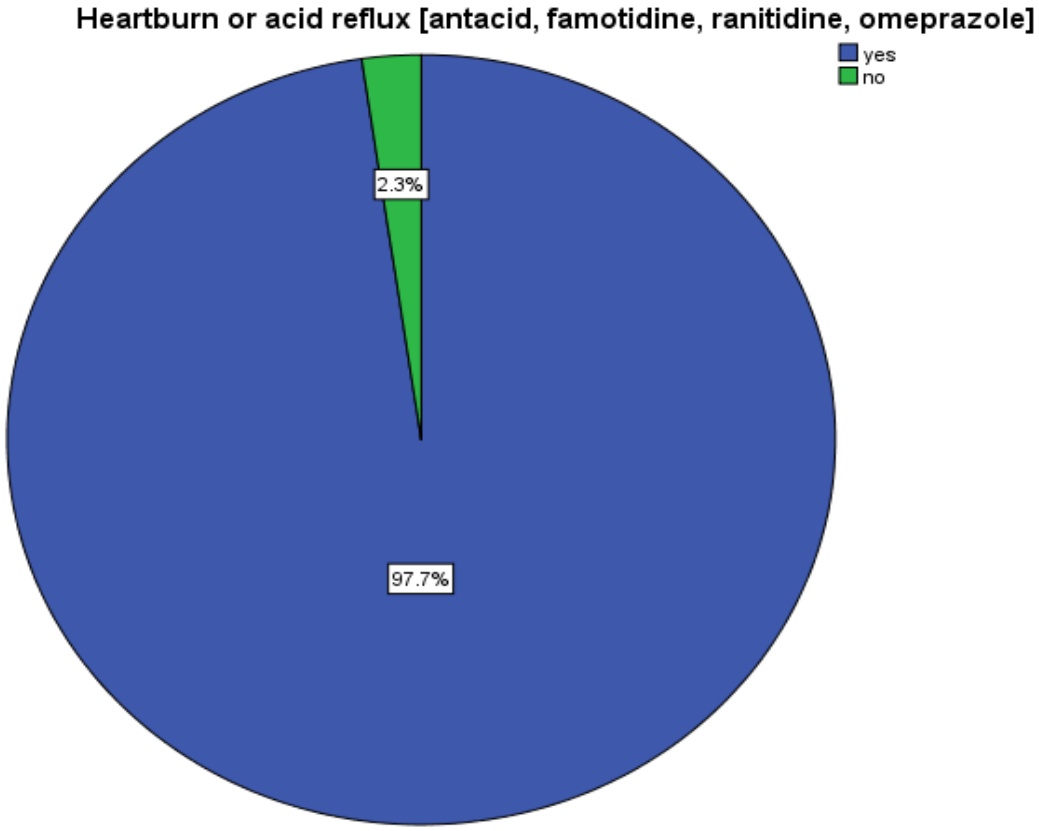
AP5. Figure 18: The percentage of taken cold, cough, or sore throat drugs [nasal sprays, Lozenges, pseudoephedrine] during current pregnancy among respondents.



AP5. Table 19: Taken heartburn or acid reflux [antacid, famotidine, ranitidine, omeprazole] during your current pregnancy among respondents.

Heartburn or acid reflux [antacid, famotidine, ranitidine, omeprazole]	Frequency	%	Valid Percent	Cumulative Percent
Yes	382	97.7	97.7	97.7
No	9	2.3	2.3	100.0
Total	391	100.0	100.0	

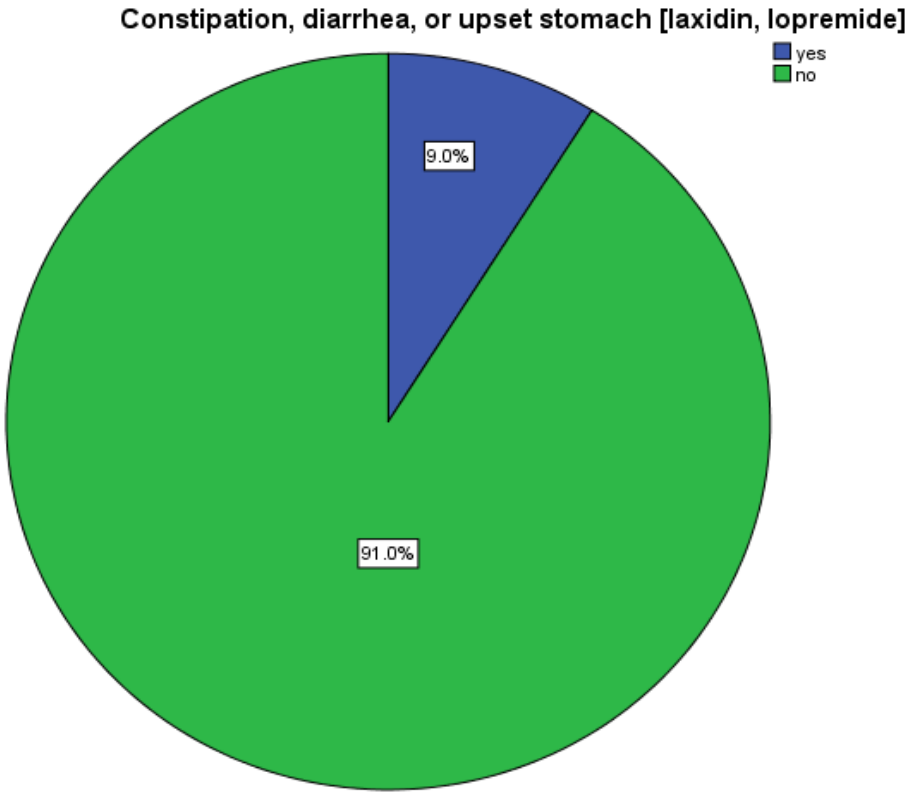
AP5. Figure 19: The percentage of taken heartburn or acid reflux [antacid, famotidine, ranitidine, omeprazole] during current pregnancy among respondents.



AP5. Table 20: Taken constipation, diarrhea, or upset stomach [laxidin, lopremide] during your current pregnancy among respondents.

Constipation, diarrhea, or upset stomach [laxidin, lopremide]	Frequency	%	Valid Percent	Cumulative Percent
Yes	35	9.0	9.0	9.0
No	356	91.0	91.0	100.0
Total	391	100.0	100.0	

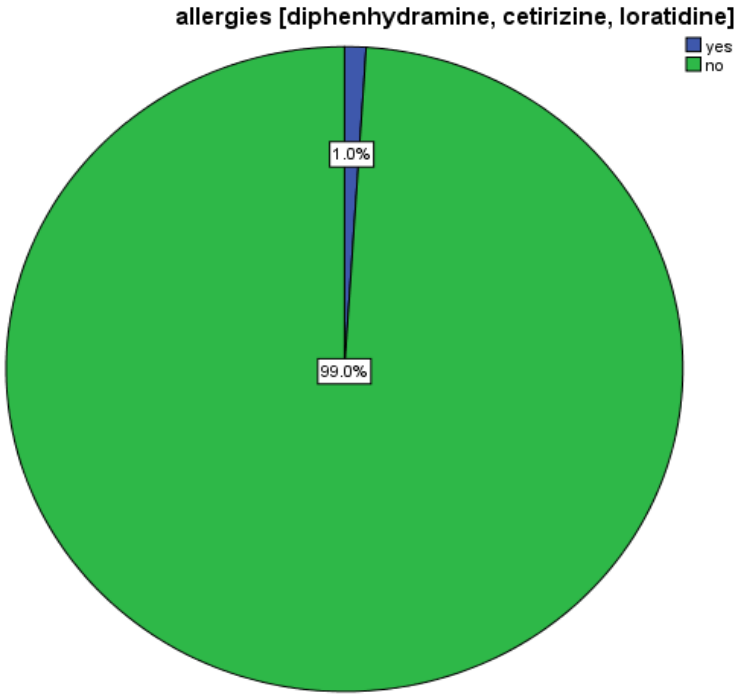
AP5. Figure 20: The percentage of taken constipation, diarrhea, or upset stomach [laxidin, lopremide] during current pregnancy among respondents.



AP5. Table 21: Taken allergies [diphenhydramine, cetirizine, loratidine] during your current pregnancy among respondents.

Allergies [diphenhydramine, cetirizine, loratidine]	Frequency	%	Valid Percent	Cumulative Percent
Yes	4	1.0	1.0	1.0
No	387	99.0	99.0	100.0
Total	391	100.0	100.0	

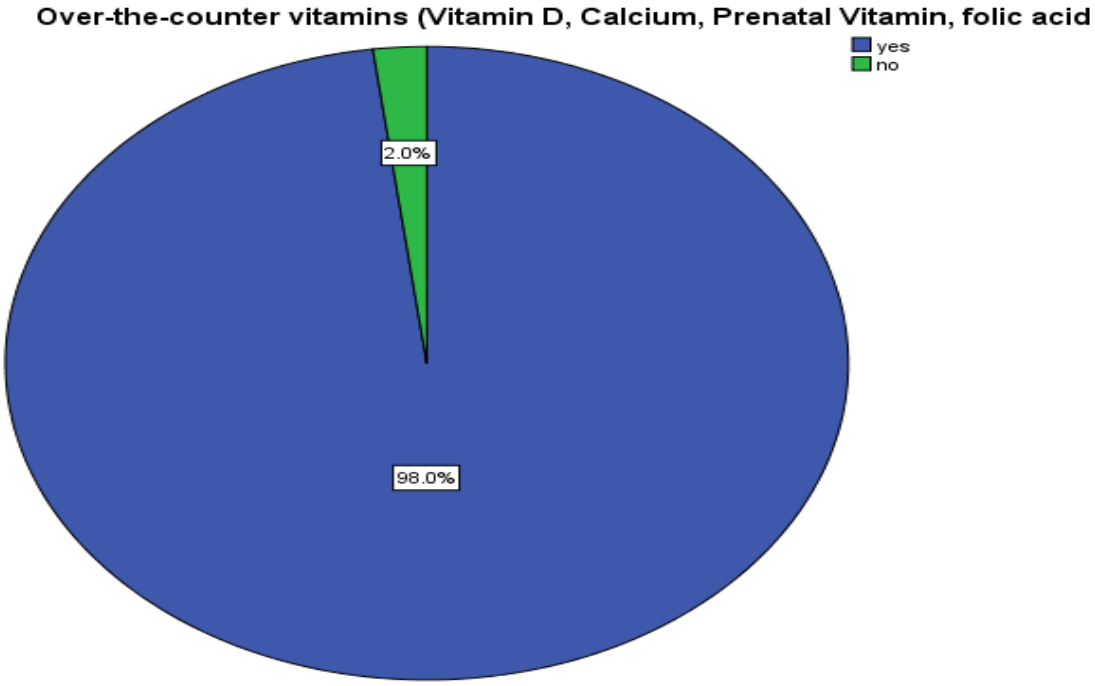
AP5. Figure 21: The percentage of taken allergies [diphenhydramine, cetirizine, loratidine] during current pregnancy among respondents.



AP5. Table 22: Taken over-the-counter vitamins (vitamin D, calcium, prenatal Vitamin, folic acid) during your current pregnancy among respondents.

Over-the-counter vitamins (Vitamin D, Calcium, Prenatal Vitamin, folic acid	Frequency	%	Valid Percent	Cumulative Percent
Yes	383	98.0	98.0	98.0
No	8	2.0	2.0	100.0
Total	391	100.0	100.0	

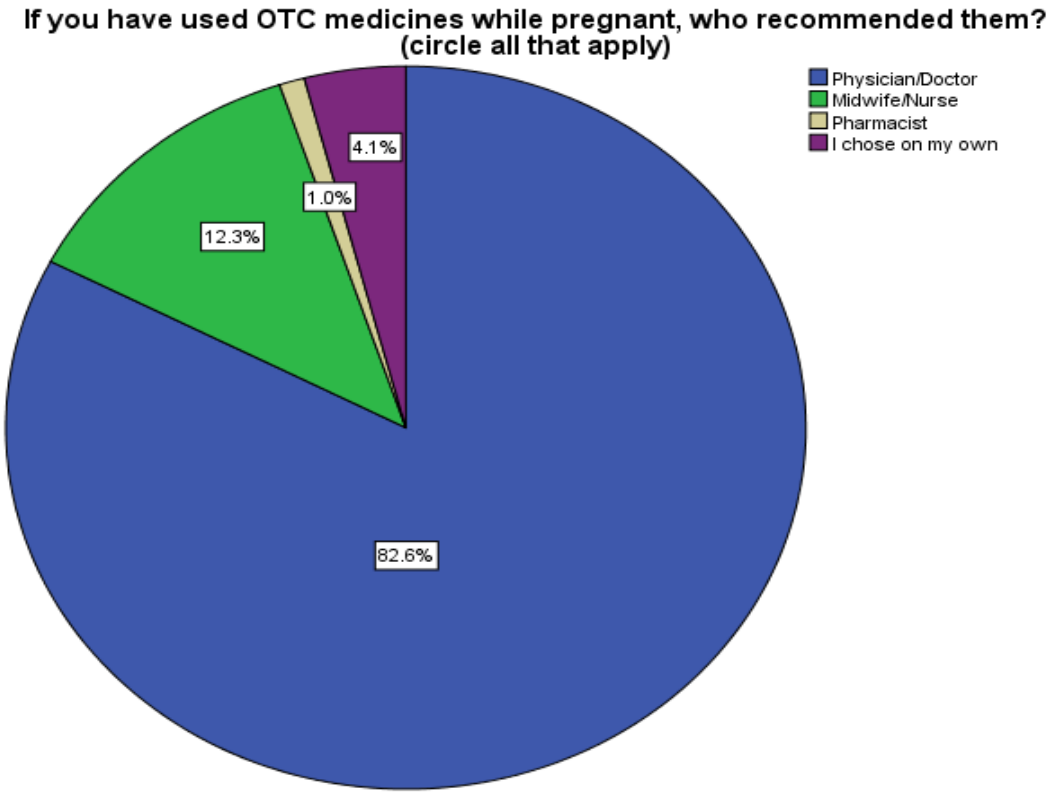
AP5. Figure 22: The percentage of over-the-counter vitamins (vitamin D, calcium, prenatal Vitamin, folic acid) during current pregnancy among respondents.



AP5. Table 23: Distribution of OTC medications recommenders.

If you have used OTC medicines while pregnant, who recommended them?	Frequency	%	Valid Percent	Cumulative Percent
Physician/Doctor	323	82.6	82.6	82.6
Midwife/Nurse	48	12.3	12.3	94.9
Pharmacist	4	1.0	1.0	95.9
I chose on my own	16	4.1	4.1	100.0
Total	391	100.0	100.0	

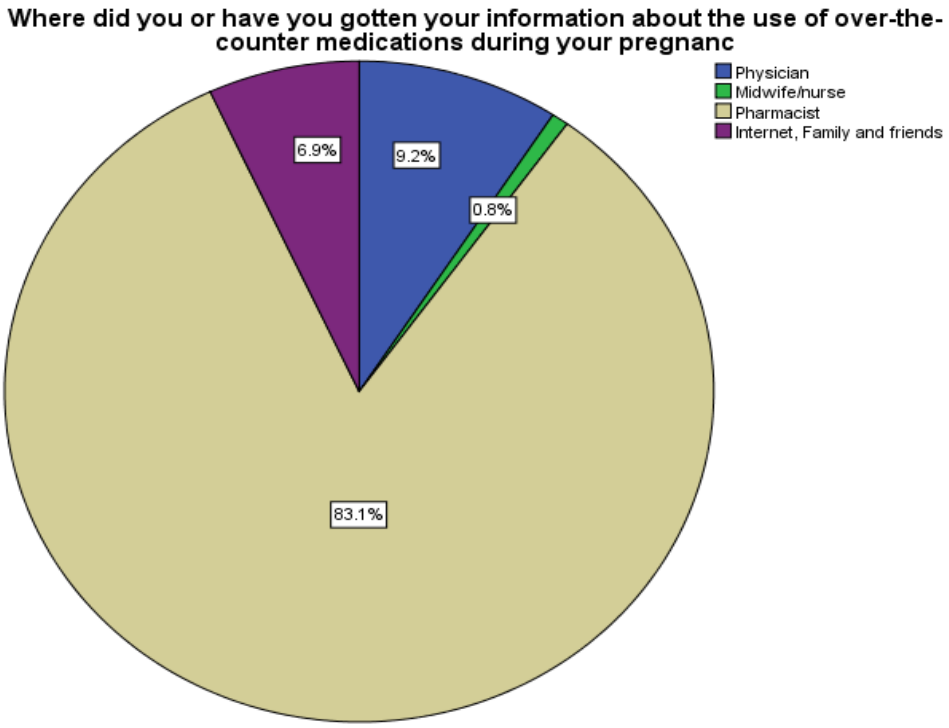
AP5. Figure 23: The percentage of OTC medication recommenders for respondents.



AP5. Table 24: Distribution of OTC medications information source for use OTC medications during pregnancy.

Where did you or have you gotten your information about the use of over-the-counter medications during your pregnancy?	Frequency	%	Valid Percent	Cumulative Percent
Physician	36	9.2	9.2	9.2
Midwife/nurse	3	.8	.8	10.0
Pharmacist	325	83.1	83.1	93.1
Internet, Family and friends	27	6.9	6.9	100.0
Total	391	100.0	100.0	

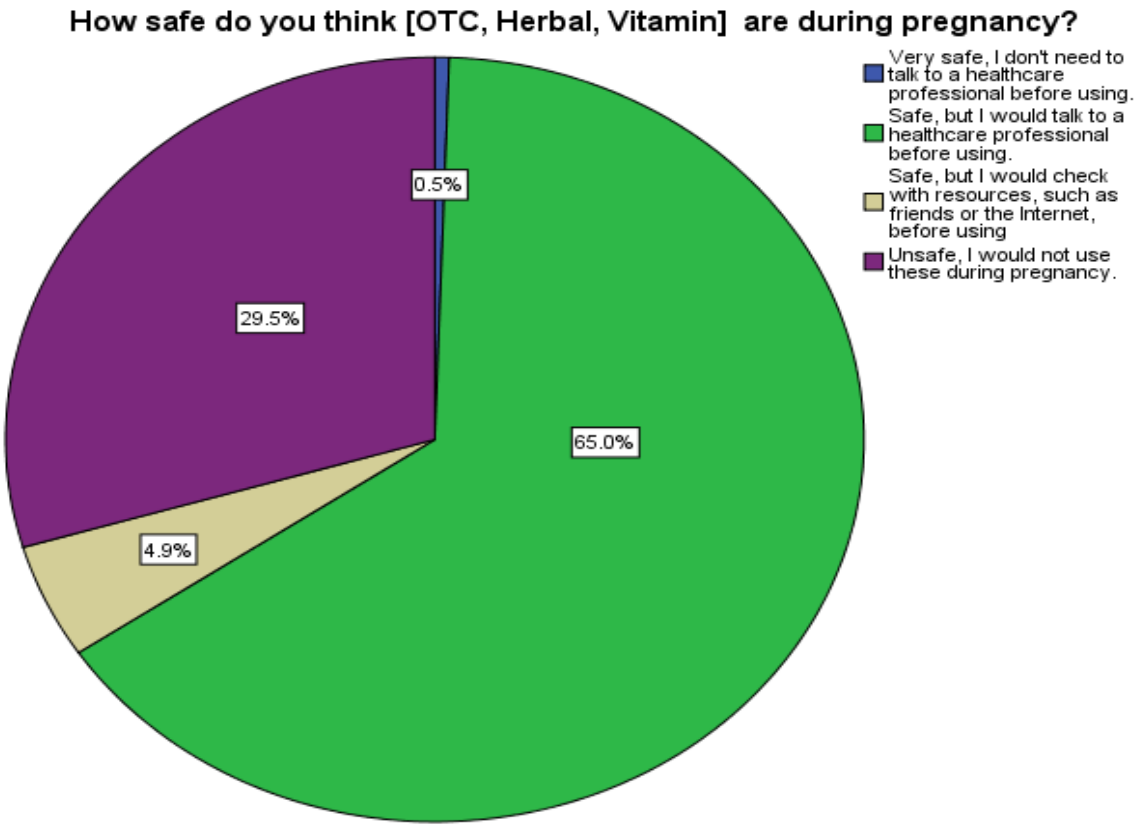
AP5. Figure 24: The percentage of the source of information about OTC medication use during pregnancy for respondents.



AP5. Table 25: The thought of the safety of [OTC, Herbal, Vitamin] use during pregnancy

How safe do you think [OTC, Herbal, Vitamin] are during pregnancy?	Frequency	%	Valid Percent	Cumulative Percent
Very safe, I don't need to talk to a healthcare professional before using.	3	0.5	0.5	0.5
Safe, but I would talk to a healthcare professional before using.	361	65.0	65.0	65.6
Safe, but I would check with resources, such as friends or the Internet, before using	27	4.9	4.9	70.5
Unsafe, I would not use these during pregnancy.	164	29.5	29.5	100.0
Total	555	100.0	100.0	

Figure 25: The percentage of the thought of safety for OTC medication use during pregnancy among respondents.



AP5. Table 26: The relationship between miscarriage and OTC medications intake during pregnancy.

OTC medication	N	Previous Miscarriage				Df	P (Chi 2)
		Yes	%	No	%		
Paracetamol, Ibuprofen and Aspirin	183	67	42.7	116	49.6	1	0.18
Cold, cough, or sore throat [nasal sprays, Lozenges, pseudoephedrine]	9	3	1.9	6	2.6		0.67
Heartburn or acid reflux [antacid, famotidine, ranitidine, omeprazole]	382	154	98.1	228	97.4		0.67
Constipation, diarrhea, or upset stomach [laxidin, lopremide]	35	6	3.8	29	12.4		0.004
Allergies [diphenhydramine, cetirizine, loratidine]	4	1	0.6	3	1.3		0.53
Over-the-counter vitamins (Vitamin D, Calcium, Prenatal Vitamin, folic acid)	383	154	98.1	229	97.9		0.87

AP5. Table 27: The relationship between nullparity and OTC medications intake during pregnancy.

OTC medication	N	Nullparity				Df	P (Chi 2)
		Yes	%	No	%		
Paracetamol, Ibuprofen and Aspirin	183	32	55.2	151	45.3	1	0.16
Cold, cough, or sore throat [nasal sprays, Lozenges, pseudoephedrine]	9	2	3.4	7	2.1		0.53
Heartburn or acid reflux [antacid, famotidine, ranitidine, omeprazole]	382	55	94.8	327	98.2		0.11
Constipation, diarrhea, or upset stomach [laxidin, lopremide]	35	5	8.6	30	9.0		0.92
Allergies [diphenhydramine, cetirizine, loratidine]	4	0	0.0	4	1.2		0.40
Over-the-counter vitamins (Vitamin D, Calcium, Prenatal Vitamin, folic acid)	383	56	96.6	327	98.2		0.41

AP5. Table 28: The relationship between prematurity or mortality and OTC medications intake during pregnancy.

OTC medication	N	Prematurity/mortality				Df	P (Chi 2)
		Yes	%	No	%		
Paracetamol, Ibuprofen and Aspirin	183	10	8.1	173	64.6	1	0.00
Cold, cough, or sore throat [nasal sprays, Lozenges, pseudoephedrine]	9	0	0.0	9	3.4		0.04
Heartburn or acid reflux [antacid, famotidine, ranitidine, omeprazole]	382	114	92.7	268	100.0		0.00
Constipation, diarrhea, or upset stomach [laxidin, lopremide]	35	0	0.0	35	13.1		0.00
Allergies [diphenhydramine, cetirizine, loratidine]	4	4	3.3	0	0.0		0.003
Over-the-counter vitamins (Vitamin D, Calcium, Prenatal Vitamin, folic acid)	383	123	100.0	260	97.0		0.053

AP5. Table 29: The relationship between gravidity and OTC medications intake during pregnancy.

OTC medication	N	Gravidity						Df	P (Chi 2)
		1	%	2	%	3	%		
Paracetamol, Ibuprofen and Aspirin	183	54	88.5	35	33.0	94	42.0	2	0.00
Cold, cough, or sore throat [nasal sprays, Lozenges, pseudoephedrine]	9	5	8.2	0	0.0	4	1.8		0.002
Heartburn or acid reflux [antacid, famotidine, ranitidine, omeprazole]	382	59	96.7	104	98.1	219	97.8		0.84
Constipation, diarrhea, or upset stomach [laxidin, lopremide]	35	18	29.5	0	0.0	17	7.6		0.00
Allergies [diphenhydramine, cetirizine, loratidine]	4	0	0.0	2	1.9	2	0.9		0.49
Over-the-counter vitamins (Vitamin D, Calcium, Prenatal Vitamin, folic acid)	383	56	91.8	106	100.0	221	98.7		.001

AP5. Tab 30: The relationship of the thought of safety of OTC drugs and OTC taken during pregnancy.

OTC medication	N	How safe do you think [OTC, Herbal, Vitamin] are during pregnancy?						Df	P (Chi 2)
		Safe, but I would talk to a healthcare professional before using	%	Safe, but I would check with resources, such as friends or the Internet, before using	%	Unsafe, I would not use these during pregnancy.	%		
Paracetamol, Ibuprofen and Aspirin	183	112	54.6	11	44.0	60	37.3	2	0.004
Cold, cough, or sore throat [nasal sprays, Lozenges, pseudoephedrine]	9	9	4.4	0	0.0	0	0.0		0.015
Heartburn or acid reflux [antacid, famotidine, ranitidine, omeprazole]	382	198	96.6	25	100.0	159	98.8		0.28
Constipation, diarrhea, or upset stomach [laxidin, lopremide]	35	35	17.1	0	0.0	0	0.0		0.00
Allergies [diphenhydramine, cetirizine, loratidine]	4	3	1.5	0	0.0	1	0.6		0.64
Over-the-counter vitamins (Vitamin D, Calcium, Prenatal Vitamin, folic acid)	383	197	96.1	25	100.0	161	100.0		0.025

مدى انتشار استخدام الأدوية المصروفة بدون وصفة طبية لدى النساء الحوامل: دراسة مستعرضة في بعض المناطق في الضفة الغربية الفلسطينية

إعداد الطالبة: ملفين مصطفى يوسف مصلح

المشرف: د. حسين الحلاق

الملخص

أصبح الإفراط في استعمال الأدوية المصروفة بدون وصفة طبية شائعاً بين الفلسطينيين، ومن ضمنهم النساء الحوامل. طمحت هذه الدراسة لإيجاد نسبة انتشار استخدام هذه الأدوية بين النساء الحوامل و تأثيرها على الحمل. وكذلك لكشف مدى وعي النساء الحوامل على خطر استعمال الأدوية أثناء الحمل. كان الدافع وراء الدراسة هو حقيقة أن استخدام الأدوية المصروفة بدون وصفة طبية قد يسبب تشوهات جنينية و مشاكل جسدية و صحية على الأم الحامل والطفل على حد سواء .

تمت الدراسة باستخدام استبيانات عُبئت من قبل 555 امرأة حامل. أظهرت النتائج أن 391 (70.5%) امرأة كانت تستخدم أدوية مصروفة بدون وصفة طبية، معظم الأدوية المستخدمة تندرج تحت الفيتامينات (98.0%)، أدوية تعالج حرقة المعدة (97.7%) ومسكنات (46.8%). 67.8% من النساء الحوامل اللاتي يستخدمنّ الأدوية المصروفة بدون وصفة طبية تتراوح أعمارهم بين 20 –40 عاماً، و64.1% يعانون من زيادة في الوزن. معظم الأدوية المصروفة بدون وصفة طبية كانت تُوجه من قبل الأطباء أولاً بنسبة 58.2%، بينما الصيادلة كانوا المصدر الأول للمعلومات الخاصة بتلك الأدوية بنسبة 83.1%. عند السؤال على مدى أمان الأدوية المصروفة بدون وصفة طبية بالنسبة للحامل، 65.0% من النساء الحوامل يعتقدنّ أن هذه الأدوية آمنة ولكن بعد الرجوع للطبيب للاستشارة، و29.5% يعتقدنّ أن هذه الأدوية لا تعتبر آمنة أبداً خلال الحمل. بينت نتائج الدراسة أن نسبة استخدام الأدوية المصروفة بدون وصفة طبية خلال الحمل عالية نسبياً، وكذلك تم خلالها تحديد أهم العوامل المؤثرة على استخدام هذه الأدوية خلال الحمل، والمخاطر التي قد تسببها و آثارها على الحمل. يشكل قلة الوعي بمدى آثار هذه الأدوية على الحمل خطراً يجب الانتباه إليه، لذلك ينصح بورشات تثقيفية للنساء الحوامل لزيادة الوعي بالاستخدام الصحيح للأدوية المصروفة بدون وصفة طبية وآثارها على الحمل إن استخدمت بالشكل الخاطئ.